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VOLUME XII
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BUSINESS TAKES A NEW PARTNER

By ARTHUR N. HOLCOMBE

Keynote of the New Deal

EXPLAINING the policies of the Administration to the people of the United States in a radio address on May 7, 1933, President Roosevelt said: "It is wholly wrong to call the measures that we have taken government control of farming, control of industry, and control of transportation. It is rather a partnership between government and farming and industry and transportation, not partnership in profits, for profits would still go to the citizens, but rather a partnership in planning and a partnership to see that the plans are carried out." Thus the President sounded the keynote of the New Deal.

It is evident that this statement cannot be taken literally. A partnership is an association of persons for the purpose of profit, in which the members are mutually principal and agent and share the risks as well as the gains. If there is no joint pursuit of profit, and no obligation to share losses, there is no partnership in the strict and legal sense of the term. But there is no cause here for contention over the meaning of words. Allowance must be made for the exigencies of political leadership. The immediate task was to lead the country out of a great depression. To this end it was believed to be necessary to stir the public to new and more determined efforts and at the same time to allay the fears which the depression had produced. It was clear that the President had in mind the establishment of a new relationship between government and industry. The precise nature of that relationship could be more conveniently revealed on another occasion. For the moment, he chose to call it a partnership. That is manifestly a figure of speech. There is ample precedent for such use of the term. Marriage, for instance, is sometimes called a partnership, in which husband and wife are partners. Clearly it was not such a relationship that the President had in mind. But presumably he intended to bring about a happier relationship than that which

had previously obtained, and his choice of a word was well suited to his purpose. There would be time enough, as the Administration program should be translated into Acts of Congress, to give the idea of partnership more definite content.

The great merit of the idea of partnership as the keynote of the New Deal was its suggestion of cooperation between government and industry. Government regulation and control—ideas which the President was careful to repudiate—were much more familiar to his hearers than the idea of partnership. But they possessed much less agreeable connotations. They suggested repression rather than the release of fresh enterprise. And the release of fresh enterprise constitutes the very essence of escape from depression. Cooperation, happily, is no exclusive relationship. It may be open to any one to cooperate. Farmers may hope by cooperating with government to gain access to markets upon more favorable terms. Business men may hope to gain protection against ruinous competition. Labor may hope for a larger share in the value of its product. Such hopes may well lead to new and more determined efforts on the part of all concerned. They may well release fresh enterprise from the bondage of depressing fears.

The hope of the Administration itself turned towards more effective government participation in economic planning. Under the Old Deal planning had not been the business of government. It had been primarily the business of business. But such planning as there was had been badly managed. American individualism was not favorable to systematic and concerted planning. Such inclination to plan as might have existed was discouraged by the antitrust laws. The Roosevelt Administration now proposed to put an end to the old individualism in so far as it should be necessary to bring about better planning. It was this purpose which gave the New Deal its radical and aggressive spirit. From this spirit the idea of partnership was materialized into the new relationship between government and industry. What forms the new relationship has actually taken, and how greatly they differ from the old, are disclosed by the measures which were presently enacted into law and the policies which have been developed in the administration of these laws.

Direct Government Ownership of Business

Examination of the measures taken by the Roosevelt Administration in pursuance of the New Deal reveals five principal forms of relationship between government and industry. The first is direct government ownership of industry. This may result either in government competition with privately-owned industry or in the complete substitution of government for private enterprise in a particular field of activity. The most striking case of the latter situation is the management of the currency. The Government has always possessed the power to coin money and regulate its value. From time to time Congress has accordingly fixed the metallic content of the dollar, but has left the regulation of its value to the law of demand and supply as enforced by the nation's bankers and business men. The collapse of the banks a year ago demonstrated the incapacity of the bankers and business men to maintain a reasonably stable purchasing power for the dollar and compelled the Government to assume a larger measure of responsi-

bility for its continued management. By taking possession of the country's gold coin and bullion, the Treasury has put an end to a part of the activities of private enterprise in this particular field of industry. The Public Works program likewise has put the Government directly into business in substitution for or in competition with private enterprise. This is happening in a most spectacular manner in the hydroelectric power industry. But these developments involve no new relationship between government and industry. They merely extend the range of an old relationship. The Post Office has long possessed a monopoly of the business of carrying the mails, and the management of the country's gold reserve by the Government or the production of hydroelectric power on a large scale, though shocking innovations to minds with settled habits of thought, adds nothing to the idea of a partnership between government and industry.

Government Business Corporations

A second relationship between government and industry under the New Deal is much like the first in effect, though different in form. This is the relationship established by the organization of business corporations, in which the Government owns the stock and appoints the directors. In form such government corporations resemble privately-owned and directed corporations organized, as a rule, under the laws of the District of Columbia or one of the states. In effect they enable the Government to control the affairs of a business enterprise and influence the policies of the whole industry with which the enterprise is connected. The business corporation has become a favorite instrument for the business operations of the Roosevelt Administration. An outstanding example is the Tennessee Valley Authority, a corporation modelled upon the Port of New York Authority and the New York State Power Authority. These are agencies with which President Roosevelt became familiar while Governor of the State of New York, and found well suited for their purposes. The Public Works Administration has organized an Emergency Housing Corporation, and the Emergency Relief Administration has organized a Federal Surplus Relief Corporation for greater convenience in the transaction of certain of their affairs. The Farm Credit Administration controls a variety of financial corporations, engaged in the refinancing of farms and the handling of farm products. The Federal Deposit Insurance Corporation and the Home Owners Loan Corporation are other examples of government business corporations engaged in financial operations.

The most important of the government financial corporations is, of course, the Reconstruction Finance Corporation, which was organized by the Hoover Administration. The Reconstruction Finance Corporation was modelled upon the War Finance Corporation, organized by the Wilson Administration to assist in financing American industry during the World War. Its existence demonstrates that the government business corporation represents no new relationship between government and industry. In fact six of these corporations were organized by the Wilson Administration during the World War, and others, such as the Inland Waterways Corporation, were organized during the interval between the World War and the great depression. Regarded as agencies of govern-

mental enterprise, they possess some obvious advantages over the ordinary bureaucratic form of organization and some less obvious disadvantages. The extensive use of the corporate form of organization for the administration of public business under the New Deal is a significant development in the science of government. It might be made the means for a real partnership between government and industry. But actually this has not yet been attempted. The new relationship between government and industry must be sought elsewhere.

Licensing Power of the Government

A third form of relationship is that which results from the use of the licensing power. By means of this power the Government enables the holder of the license to engage in a business upon conditions prescribed by itself, reserving the right to put an end to the engagement at discretion. The amount of discretion retained by the Government may vary widely, but the result is to give the Government a more or less arbitrary authority over the initiation and the termination of the activity as well as over the methods of operation. The licensing power is one of the oldest forms of government regulation and control. The only novelty in its use by the Roosevelt Administration, if it be a novelty, consists in the wide range of business activities over which the power may be exercised and the great extent of the discretionary authority which has been conferred upon the Administration. A few examples will illustrate the possibilities of this mode of regulation and control. By an Executive Order, dated April 20, 1933, the Secretary of the Treasury was authorized "in his discretion and subject to such regulations as he may prescribe" to license exporters of gold and bullion. Thus, the Treasury obtained the power to regulate and practically to control a large part of the business of foreign exchange. By the Agricultural Adjustment Act of May 12, the Secretary of Agriculture is authorized to issue licenses permitting processors to engage in the handling of any agricultural commodity subject to such terms as may be necessary to eliminate unfair practices or charges that prevent the restoration of normal conditions in the marketing of such commodities. This Act certainly gives the Secretary an extraordinarily wide discretion. To what lengths the Secretary may go in regulating and controlling an industry by means of such licenses is well illustrated by the form of license issued to those concerned with the Code of Fair Competition for the Distilled Spirits Industry. By superimposing the Federal Alcohol Control Administration upon the Code Authority for that industry, the Roosevelt Administration has secured a degree of control over the manufacture and wholesaling of hard liquors which must astonish some of the supporters of the Twenty-first Amendment.

The National Industrial Recovery Act of June 16 confers a similar licensing power upon the President in order to make effective the codes of fair competition in the nonagricultural industries. In this Act it is provided that, if deemed necessary, no person shall engage in any specified business without a license "issued pursuant to such regulations as the President may prescribe." The exercise of this power was restricted to the period of a year after the enactment of the law, during which period the orders of the President suspending or revoking a license were to be final, if in accordance with law, and

heavy penalties were provided for their violation. Such drastic powers of regulation and control certainly cannot be what the President had in mind when he spoke of a partnership between government and industry. They introduce no new relationship between the two. They merely exploit an old relationship. The great caution which the President has shown in exercising his licensing powers indicates that it is not by such as these that the spirit of the New Deal is to be judged.

Regulation and Control by Executive Orders

A fourth form of relationship is that which obtains between the Government and industries subject directly to regulation and control by executive orders and decrees. The regulation and control of railroads by the Interstate Commerce Commission is the outstanding illustration of such a relationship. Nobody, however, would describe this relationship as a partnership. The President's radio address of May 7 seems to be an explicit disclaimer of the intention to infuse the spirit of this relationship into the measures of the New Deal. Nevertheless, some of the leading measures of the Administration have brought about a noteworthy increase in its powers of direct regulation and control. The Securities Act affords a ready instance of this result, and the proposed legislation for the regulation of stock exchanges points in the same direction. The Emergency Banking Act of March 9 and the Glass-Steagall Act are other measures which have extended the regulatory powers of the Roosevelt Administration. It is under the former, incidentally, that the clearest case of a literal partnership between government and industry has occurred. By purchasing preferred stock in reopened banks the Reconstruction Finance Corporation has become a kind of limited partner in such banks, and if its directors, together with the members of the Federal Reserve Board, do not already possess all the authority they need over the members of the national banking system, they might utilize the opportunities afforded by such a partnership to increase their influence upon the management of the banks. In fact the further extension of federal control over the banking business is more likely to be accomplished by fresh legislation of the ordinary regulatory type. Despite the President's disclaimer, the method of direct control through executive orders and decrees is too convenient to be abandoned by an administration which is heavily committed to a policy of more stringent regulation of private industry.

A New Relationship—Partnership in Planning

There remains the form of a relationship established by the marketing agreements and codes of fair competition which the Administration has fostered under the Agricultural Adjustment Act and National Industrial Recovery Act. There can be no doubt that these agreements and codes have brought into existence a new relationship between government and industry. The parties to the agreements and the members of the codes have formed combinations, which under the Old Deal surely would have been regarded as in restraint of trade. This is most clearly evident in the case of the marketing agreements arranged under the terms of the Agricultural Adjustment Act. They are expressly designed to restrict output and raise prices. The

various agreements for the rice and citrus fruit industries, for example, illustrate very plainly the possibilities of production limitation and price fixing which these government-fostered combinations have opened up. They go far beyond the arrangements for leasing land from farmers in order to take it out of production, or paying money for the reduction of certain crops, which are authorized by the same Act. The latter are merely a new and intricate form of bounty, which is an old device for the regulation of agricultural enterprise. But in the case of the marketing agreements, the Government not only becomes a kind of partner in the agreement, by sponsoring and approving it, but also gives its partners a privileged status by exempting them from the antitrust laws. In the case of the codes of fair competition, framed under the authority of the NIRA, the purpose to limit production and raise prices is less clearly expressed. But it is implied in the spirit of the Act and consummated in the same manner as in the Agricultural Adjustment Act by the suspension of the antitrust laws for the period of the emergency. It is this suspension of the antitrust laws and participation by the Administration in combinations in restraint of trade which constitute the first principle of the new relationship between government and industry.

The second principle of the new relationship is closely related to the first. The combinations which the Government fosters, though exempted from the antitrust laws, may not become monopolies. This provision of the AAA and NIRA has already caused some confusion and controversy, and will doubtless cause more before the emergency passes, but its intent seems reasonably clear. If a government-fostered combination in restraint of trade is not to become an odious monopoly, it must avoid the objectionable attributes of monopoly. For instance, it must not raise prices beyond a reasonable level. For the agricultural industries the AAA prescribes a standard of reasonable prices, namely, those prices which will secure for the farmer the equivalent of the purchasing-power of his basic crops at a stipulated past period. For other industries the NIRA prescribes no definite standard, but a fair inference from the language of the Act is that the prices of industrial products must not exceed fair competitive prices. The problem of preventing monopoly, therefore, resolves itself into a problem of maintaining fair competition. Fair competition may be maintained by three different methods: (1) by licensing competitors who compete fairly, and excluding others from the industry; (2) by authorizing an agency such as the Federal Trade Commission to require competitors to cease and desist from unfair practices; or (3) by appointing public officers to the governing boards of government-sponsored combinations with a view to stopping unfair competition before it begins. The last of these three is the method which the Roosevelt Administration has initiated and upon which it appears to rely chiefly for the necessary protection against monopoly. It is a method which entitles the Administration to speak of this aspect of the New Deal as a partnership between government and industry. The public representatives upon the Code Authorities form the substance of the bond between the partners.

The third principle of the new relationship between government and industry follows inescapably from the second. If the Government is to par-

ticipate directly in the process of establishing fair competitive prices, it must assume a larger measure of responsibility for fixing the compensation of the principal factors in production, particularly the rates of interest and of wages. The Federal Government has long possessed an influential voice in the fixing of interest rates through the operations of the Federal Reserve Board. Since the depression it has exercised an increasing influence over the money and credit market through the operations of the Reconstruction Finance Corporation. The recent creation of the Farm Credit Administration and the Home Loan Bank Board makes it certain that the Government will possess an important share in the responsibility for fixing the rate of interest for an indefinite period beyond the existing emergency. The determination of rates of wages encounters greater difficulties. In pursuance of the policy embodied in the NIRA, the Administration has taken two long strides into the field of wage determination. First, it has set up schedules of minimum rates and maximum hours for most branches of industry. Secondly, it has guaranteed that labor shall have the right of bargaining with its employers through representatives of its own choice. There is an unfortunate vagueness in the provisions of the NIRA relating to collective bargaining between capital and labor, which has already caused much friction between the two, and there will doubtless be much more friction between them before the full implications of this measure are generally understood. But the obligation upon the Government is clear. There can be no satisfactory process for the establishment of fair competitive prices, for the products of industries which have taken in the Government as a new partner, that does not include systematic and comprehensive arrangements for the establishment of fair wages. Partnership between government and industry involves the recognition of labor also as a kind of partner.

It is fair to presume that this was the new relationship which the President had in mind when he spoke of a partnership between government and industry in his radio address of May 7. It was to be, as he said, no ordinary partnership. It should be a partnership "in planning" and a partnership "to see that the plans are carried out." But planning, as commonly understood, means something more than devising plans for recovery from a depression. It means devising plans also for maintaining prosperity after recovery from depression. The Agricultural Adjustment Act and the National Industrial Recovery Act, however, are limited to the duration of the emergency, and in the case of the latter Act to not more than two years in any event. Only in a very restricted sense of the term, therefore, can they be described as measures providing for partnership in planning, unless it be assumed that the principles of the new relationship between government and industry were intended to become permanent policies of the United States. If the AAA and the NIRA be regarded merely as temporary expedients to promote recovery, the new relationship between government and industry becomes merely a transitory phenomenon of the depression. As such, it would be an interesting experiment, but hardly important enough to justify extraordinary attention amidst the throng of expedients to which the Administration has resorted. If the fortunes of this partnership receive extraordinary

attention, as they have, a partial explanation must be a widespread belief that the new relationship may prove permanent. Believing, as many do, that the partnership in planning will survive the depression, they are bound to regard the experiment as much more than an emergency measure of relief and recovery. It becomes a great adventure in government.

Political Function of Code Authorities

Rugged individualists, doubting the necessity or propriety of extending the sphere of government into the administration of profit-seeking industry, naturally view such an adventure with alarm. To those of them who, like the late President Harding, have "meant to have less of government in business," there is a passage in John Stuart Mill's *Principles of Political Economy* that should furnish food for thought. This passage, which occurs in the magistral chapter which treats of the grounds and limits of the *laissez-faire* or non-interference principle, has not received the attention in modern times that it deserves. "The third exception which I shall notice, to the doctrine that government cannot manage the affairs of individuals as well as the individuals themselves," Mill observes, "has reference to the great class of cases in which the individuals can only manage the concern by delegated agency, and in which the so-called private management is, in point of fact, hardly better to be called management by the persons interested, than administration by a public officer." Mill thereupon proceeds to set forth his reasons for believing that the differences between "delegated agency," that is, the officers of business corporations, and government officers are commonly exaggerated, and that the defects of government management are not necessarily greater than those of management by business corporations.

Mill's view concerning the unrepresentative character of much corporate business management will seem impressively prophetic to readers of such modern works as W. Z. Ripley's *Main Street and Wall Street* or A. A. Berle, Jr. and G. C. Means' *The Modern Corporation and Private Property*. The argument, by means of which Mill disposes of the obvious objection to his view, though written more than eighty-five years ago, has a strikingly modern ring. "It may be objected," he wrote, "that the shareholders, in their collective character, exercise a certain control over the directors, and have almost always full power to remove them from office. Practically, however, the difficulty of exercising this power is found to be so great, that it is hardly ever exercised except in cases of such flagrantly unskillful, or, at least, unsuccessful management, as would generally produce the ejection from office of managers appointed by the government. Against the very ineffectual security afforded by meetings of shareholders, and by their individual inspection and inquiries, may be placed the greater publicity and more active discussion and comment, to be expected in free countries with regard to affairs in which the general government takes part." If ordinary stockholders possess little effective power to control the proceedings of the executives of modern business corporations, how much less can they expect to control the proceedings of the trade association executives and members of code authorities, to whom the function of planning, in so far as there is any general planning for competitive industry at the present

time, has been chiefly entrusted! The rugged individualist, who opposes the great adventure of partnership between government and industry in planning, must find some better argument, if he respects the authority of John Stuart Mill, than any that may be based upon the assumption that corporate officials are necessarily more reliable agents than public officers for the exercise of such a delicate responsibility.

Mill's reasons for preferring the officers of private corporations for the management of such business affairs as are commonly entrusted to delegated agency were of a different kind. He specified three: (1) "the mischief of overloading the chief functionaries of government with demands upon their attention, and diverting them from duties which they alone can discharge, to objects which can be sufficiently well attained without them"; (2) "the danger of unnecessarily swelling the direct power and direct influence of government, and multiplying occasions of collision between its agents and private citizens"; and (3) "the inexpediency of concentrating in a dominant bureaucracy all the skill and experience in the management of large interests, and all the power of organized action, existing in the community." These continue to be sound reasons against excessive concentration of authority in the hands of the Federal Government, and constitute a cogent argument against the policy of regulating trade practices by general law or by special orders issued through a single executive agency. Successful planning calls for the mobilization of experience and the organization of thought on a great scale, and is beyond the powers of any narrow group of officials. Such considerations as those emphasized by Mill furnish the best justification for entrusting the business of planning to the Planning and Fair Practice Committees and Code Authorities of the various industries in accordance with the methods of the NRA and AAA. These committees and authorities undoubtedly hold forth the promise of constructive service as instruments of government under the exacting conditions of the present age. But it would be very naïve to suppose that public interests would not be in continual danger of subordination to private ends if the Code Authorities consisted exclusively of the officers of business corporations and representatives of trade associations and institutes. The capacity of the new partnership in planning to survive depends, not only upon the theoretical value of the Code Authorities as instruments of government, but also upon the practical ability of the public representatives in these Code Authorities to protect the public against injurious conspiracies by the representatives of private and special interests.

Public Representation on Code Authorities

It must be conceded that, in the rush to frame Codes of Fair Competition for as many industries as possible in the shortest space of time, the problem of organizing the Code Authorities so as to secure adequate protection for public interests has been unduly neglected. The practice has been to appoint at least one representative of the NRA on each Code Authority with a voice but not a vote in its proceedings. The Code Authorities for all the major industries, that is, as defined by the NRA, all industries with more than fifty thousand employees under normal

conditions, contain three representatives of the public, and many Code Authorities for the minor industries also contain three public representatives. One of the public representatives is usually the Division or Deputy Administrator who has been in charge of the framing of the code. He is likely to be a corporation executive on leave of absence from his business, and the others have generally been men of the same type. Occasionally persons of a different type are selected. A noteworthy instance was the Motion Picture Code Authority, to which Dr. A. Lawrence Lowell, Mr. "Eddie" Cantor, and Miss Marie Dressler were originally appointed to represent the NRA. In this case Dr. Lowell refused to serve, on the ground that he disapproved certain provisions of the code and would be powerless to change them. In his letter to General Johnson, declining the appointment, he stated his conviction that a position on the Code Authority would give no opportunity for exercising any useful restraint upon the production of demoralizing films. Mr. Cantor, who was also appointed as a public representative on the Amusement Code Authority, in threatening to resign from the latter on account of proposed changes in the subcode for chorus girls, to which he was strongly opposed, expressed a somewhat less pessimistic view. "I have no vote on the Code Authority," he was reported as saying, "but I can holler loud, and sometimes that is as important as a vote."

The root of the difficulty seems to have been the lack of clear instructions to public representatives on Code Authorities or even of any settled policy on the part of the NRA itself concerning the proper functions of such representatives. In setting up the Code Authorities it was necessary to rely largely upon the cooperation of the trade associations and institutes, which were encouraged to take the initiative in framing the codes. The NRA seems to have been preoccupied with protecting the interests of the public in the terms of the codes and to have given little thought to the means of protecting the public interests in the subsequent administration of the codes. Doubtless it was necessary that first things should come first, but the consequence has been misunderstanding and confusion. In clearing up these misunderstandings and confusion the NRA will be greatly helped by the fact that its decisions in connection with the fundamentals of the new relationship between government and industry, regarded as an adventure in government, have been sound. In the first place, it showed a fine foresight in deciding to cooperate as far as possible with existing trade associations and institutes in organizing the industries for the purpose of planning and seeing that the plans are carried out. Secondly, it did well to reject the free use of the licensing power and extensive reliance upon executive orders to maintain fair competition, preferring to seek a due influence over the administration of the Codes of Fair Competition through its representatives on the Code Authorities. Thirdly, the Administration chose wisely in recognizing from the beginning that a fruitful partnership between government and industry must be broad enough to include labor also as a kind of partner. The fact that these primary decisions were wisely made should make much easier the next task in the pursuit of this great adventure in government, namely, the strengthening of the public representation upon the Code Authorities.

Defective Organization of Code Authorities

The extent to which the NRA has relied upon the trade associations for the administration of the codes is shown by the methods of selecting the Code Authorities. In about three-fifths of the fifty major industries, for which codes had been approved down to the end of February, all the members of the Code Authority, other than those appointed by the NRA to represent the public, were selected by a trade association or institute, or by a combination of trade associations. In many of these industries the Code Authority is identical with the governing board of the trade association for the industry. In about a quarter of the major industries a trade association selected a majority of the members of the Code Authority, although provision was made for the selection of a limited number of members of the Authority by members of the industry not belonging to its trade association. In a few cases the code provides for the selection of the Code Authority by "a fair method," which sometimes is specified in the code itself and otherwise is left to be worked out later. In two cases, those of the motion picture and petroleum industries, the industries were so disorganized that the members of the Code Authority were appointed by the President of the United States.

In two hundred minor industries, for which codes had been approved before the end of February, there was a greater proportion of cases in which provision was made for the representation of members of the industry not belonging to its trade association, or in which Code Authorities were selected by some "fair method" independent of any trade association. In most cases where the NRA has relied upon a trade association, or combination of associations, for the administration of the code, it has found the association "truly representative," although in some cases it has required the modification of the rules for the admission of members of the industry to the association before giving its approval. By giving trade associations authority to assess nonmembers for a share of the expenses of administering the codes, it has greatly strengthened their position in their respective industries. It is clearly incumbent upon the NRA to make sure that these associations are in fact "truly representative" of their industries, or to provide other methods of selecting members of Code Authorities which will be fair to all concerned.

A more serious defect in the administration of the codes is the unsystematic and ineffectual method of selection which has been adopted by the NRA for the choice of public representatives on the Code Authorities. Too often the representatives of the public seem to have been NRA officials without sufficient attachment to the public service or business men with insufficient detachment from their private businesses. The public interest in a fair administration of the codes cannot be adequately protected by such representatives. With the best of faith they will inevitably regard the public interest too much from their special point of view as business men. It is desirable that a special corps of trained experts be recruited to form a permanent panel from which selections can be made for public representatives on the various Code Authorities. These men should give their full time to the task of representing the public and should have the aid of such research and statistical facilities as may be necessary to supply them with due informa-

tion concerning the industries to which they are appointed and the operation of the codes which they help to administer. As long as the public organization of industry under suspension of the antitrust laws remains a great adventure in government, it is of the highest importance that the public representatives in the government of industry possess the best possible qualifications for their task. Upon their competence and devotion to duty depends in no small measure the success of the adventure. They should form a part of the federal professional and scientific service under the civil service system, and should enjoy the privileges and immunities which are proper for such civil servants as well as submit to the necessary obligations. Unless the public can have confidence in their representatives on the Code Authorities, the new relationship between government and industry will surely fail.

Another serious defect in the administration of the codes is the lack of a settled plan for the representation of labor in the administrative process. To be sure, the interests of labor have on the whole been well protected in the making of the codes. The Labor Advisory Board of the NRA has been an efficient body, comparing not unfavorably with the Industrial Advisory Board, which has been responsible for the protection of the special interests of employers. It has shown a generally sound judgment in the fixing of minimum wages and maximum hours of labor. It has also secured special representation for labor on a few of the Code Authorities, notably, among the major industries, the transit, men's clothing, and motion picture, and also radio broadcasting and a few others among the minor industries. But, in general, it has taken the view that there should not be special representatives of labor on the Code Authorities. Since the labor provisions of the codes are chiefly concerned with maximum hours and minimum wages, the greater part of the field of collective bargaining lies outside the jurisdiction of the Code Authorities. Evidently labor representatives on Code Authorities would generally have responsibilities beyond their powers, and their absence from most of the Code Authorities is probably a gain rather than a loss to labor. But the NRA has an obligation to safeguard the rights of labor in the new relationship between government and industry, so that they may be respected in the whole conduct of business as well as in the framing and administration of the codes. The formal recognition of the right of employees to be represented by persons of their own choice in negotiations with employers over wages and working conditions is not enough to put them on a parity with employers in such negotiations. It is necessary that appropriate measures be taken to make the right of collective bargaining effective. This would seem to imply at least such aid in the organization of labor as has been rendered to employers in the organization of the Code Authorities themselves. Such an obligation involves the organization of representative bodies for labor in industries where existing labor organizations are inadequate or not truly representative. It may also involve the appointment of representatives of the public to sit on the governing boards of such labor organizations, as public representatives now sit on the Code Authorities.

Conclusion—Need for Commanding Public Confidence

If the partnership between government and industry is to be permanent,

it must express a relationship between the partners which can command the confidence of the public. The nature of this relationship is a more important consideration in determining the future of the NRA than its immediate contribution to the process of recovery. The detailed provisions of the codes can be altered, as General Johnson intimated in his opening address to the conference on code revision, which assembled in Washington on February 27, and presumably they will be altered in response to the teachings of experience. If recovery is accomplished, errors of policy in the framing and administration of particular codes will be disregarded. It is not the merits or demerits of specific measures adopted by the NRA in an emergency, but the usefulness promised by its machinery and methods for dealing with the problems of a longer future, which will count most with those who pass final judgment upon the new relationship between government and industry.

From this point of view the significant features of this adventure in government are the forms of representation established for industry and labor and the processes of administration by means of which employers, wage earners and consumers may be reconciled to a tolerable adjustment of their conflicting interests. Much remains to be achieved before the forms and processes of the NRA can be pronounced sufficiently promising to assure its future. Yet enough has been accomplished to warrant the hope, indeed the expectation, that these forms and processes will be so improved as eventually to become an epochal addition to the American system of government. For it has become clear that there cannot be much substantial improvement in the administration of business without substantial improvement also in the structure and operation of government. In an age when the concentration of power in the hands of private business executives, especially the officers of great corporations, organized primarily for profit, outruns the traditional mechanisms for holding them to a proper responsibility, a suitable partnership between government and industry appears to be a wise extension of the old American principle of the separation of powers. The NRA, regarded as an adventure in government, is consistent with the spirit of American institutions. By introducing more law and order into industry, it should be the means of strengthening the foundations of government itself.

THE EQUATION OF ECONOMIC BALANCE

By M. C. RORTY

What Is Economic Balance?

ECONOMIC balance may be considered, in a very narrow sense, to be that special and desirable equilibrium which obtains when the existing supply of capital and other durable goods shows only normal working margins over current requirements, and when the current production of capital goods, of durable consumption goods, and of nondurable consumption goods and direct consumer services is in similar working balance with consumers' demands and with needs for the replacement and long-term expansion of capital equipment. Under such conditions of balance, employment tends to be at its practicable maximum, price levels tend to be free from violent changes, and the expansion of currency, credit, and money flow parallels closely the trend line of total economic activities.

From a different standpoint, we might seek to picture this special equilibrium in terms of full employment. But it is at least theoretically possible to have full employment without an ideal economic balance, as when brought about by large expenditures on public works, or, in the reverse direction, to have economic balance without full employment, as in cases where incorrectly determined wage rates may throw normally employable workers into a semipermanent unemployable class, or may attach to certain occupations an excess of workers subject to chronic part-time employment.

The optimum condition of balance does not, of course, involve an absolutely fixed and unchanging level of production and consumption. The total volume of activities may increase, or in theory even decline, provided only the changes take place gradually and in due accordance with the corresponding long-term changes in economic activities.

However, as we are only too well aware, such balance in any national economy is the condition for which we hope and strive, but to which, except perhaps momentarily, we can never wholly attain. For practical purposes in economic analysis, it is, therefore, desirable to establish our balance sheet, or equation of economic factors, on such a basis as to admit not only the optimum condition, but also those prevailing conditions when the balance varies more or less widely from the optimum.

If, then, we approach the problem of economic balance from this broader standpoint of picturing the entire range of variations in economic activities, we are, nevertheless, still dealing with a true balance and with balance sheet possibilities. A scale beam is just as truly in balance when it comes to rest in an inclined position, as when the scale pans stand at identical levels—and it continues to be in balance, moment by moment, even while the weights are gradually being adjusted to bring the scale pans to a level.

Total Money Flow

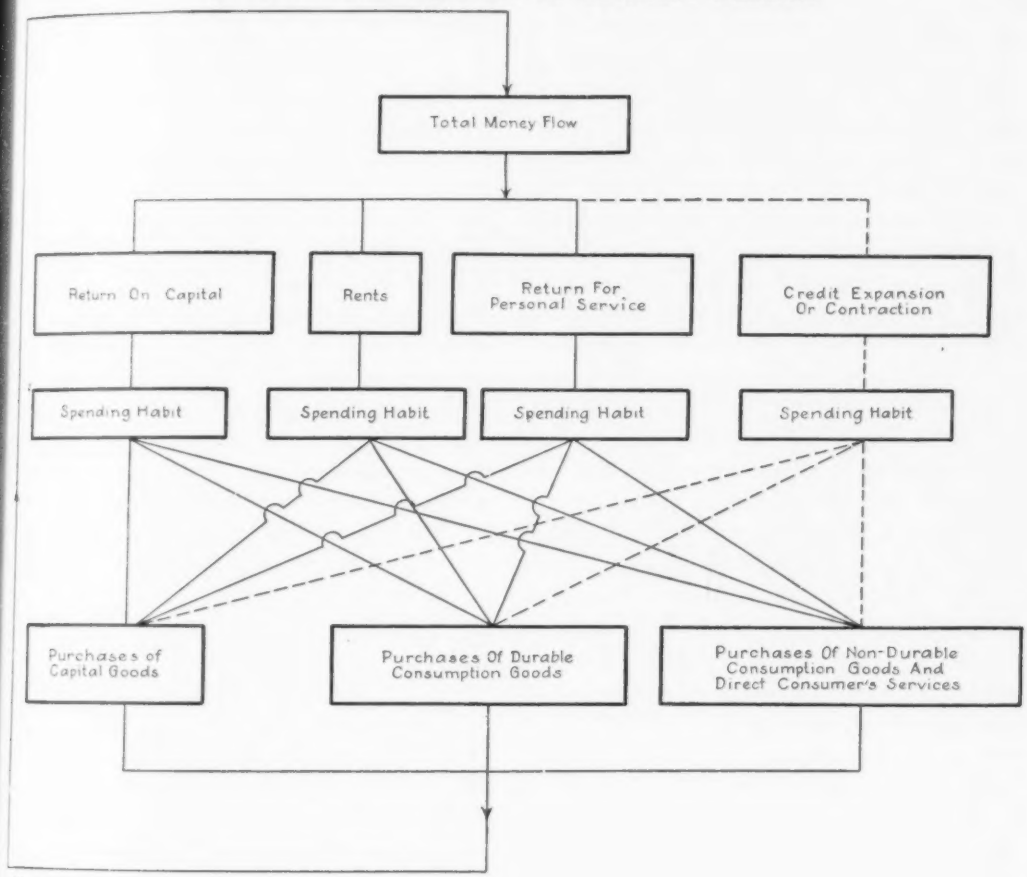
The accompanying chart is an attempt to set up a simplified and generalized picture of the momentary (or short period) balances in our economy. It makes no claim to originality in basic principles, and, like the equation of exchange, proves nothing as to

cause and effect relations. Furthermore, it is only one of many similar diagrams, all equally valid and all interrelated, which might be set up, from varying viewpoints and for different special purposes, as convenient frameworks into which to fit and cross-check our statistics and our thinking with regard to the changing flow of economic activities.

The particular form of diagram which has been adopted is designed primarily for the analysis of business-cycle phenomena, with particular reference to those cycles which arise from what may be characterized as normal, rather than catastrophic, changes in economic factors.

The total money flow pictured in the chart is fundamentally that corresponding to the total of all individual incomes, with supplemental allowances for credit contraction and expansion. Such flow represents, of course, only a fraction of the total of monetary transactions and of purchases and sales. It excludes that great mass of real estate and security transactions which con-

CHART I. THE EQUATION OF ECONOMIC BALANCE



Notes:
——Positive money flow.
- - - -Positive for credit expansion; negative for credit contraction.

stitute mere transfers of title, as distinguished from new construction and new financing. It measures the movement of commodities and services primarily at the point of ultimate usefulness to individuals or of application to productive purposes. It disregards many successive intermediate transactions and service operations which take place, for example, in the movement of raw materials for a pair of shoes from original producers through their many stages of manufacture to final delivery to a customer at a retail store. Furthermore, it does not picture in detail the reverse of these transactions and operations in the successive steps by which, in due course, the retail price paid for such pair of shoes appears once again as income of individuals. And, finally, as to purchases of capital goods, it measures only that volume of activities which has its origin in new investment and in direct purchases by individuals, and omits an important further volume of purchases of similar goods that has its origin in current charges for repairs and replacements which are loaded upon the prices of goods and services.

In spite of these and other limitations, the particular cross section of money flow indicated by the diagram has, nevertheless, the major advantage from the standpoint of business-cycle analysis that it pictures and measures the variations in such flow at the point where human psychology—human hopes and fears—and human abilities and inabilities operate with primary effect to determine the changing volume and distribution of production and consumption.

There are, of course, certain factors which operate in other ramifications of the money flow to change the total volume and character of activities. Speculative buying or nonbuying of raw materials, and of intermediate products, and variations in merchants' stocks of finished goods are occasionally of substantial amount and involve important changes in total credits. But these items of variation are mainly of a temporary character and are dominated in the end by those primary influences which are covered by the diagram.

To the extent that any of the preceding factors may have important, even if temporary, influences on the trend or magnitude of economic movements, or the conditions of balance, the economic statistician must, of course, make his due allowances. Furthermore, as will be pointed out later, the diagram requires and lends itself to certain adjustments for governmental operations, for international trade, and for the reinvestment of corporation surpluses or the opposite condition of the payment of corporation interest and dividends from the proceeds of corporation borrowings or drafts on surplus funds.

Individual Incomes, and Credit Expansion or Contraction

To return, now, to the specific features of the diagram, the primary division of money flow is into the recognized major categories of (1) return on invested capital, (2) rents of natural resources, and (3) returns for labor and other personal service. For the purposes of this diagram, entrepreneurial "profits" are assumed to be resolved into their similar constituent elements, although it would be entirely possible to set up such profits as a separate item with its associated "spending habit." Finally, to make the diagram applicable to conditions where purchasing power is being increased by credit expansion or reduced by credit contraction, a fourth item is

introduced under the heading of "Credit Expansion or Contraction," which represents the net composite of all individual items of expansion and contraction in this category.

The economic statistician who attempts to compute the net rate of credit expansion or contraction for the purpose of establishing his balance of factors at any given moment will, of course, need to exercise particular care to make sure that his handling of all items is consistent with his major purpose.

If we were dealing with an economic system in which credit did not exist in any form, and bank deposits represented only coin safeguarded in bank vaults, our measures of changes in money flow would be wholly in terms of the actual circulation of coin. Fortunately, however, for statistical purposes, our credit currency is today so dominant in the flow of purchasing power that changes in such flow are quite accurately indicated by changes in credit factors and, barring periods of hoarding and of extensive bank closures, the further adjustments which may be necessary to allow for increases or decreases in actual cash reserves should be of minor importance. Furthermore, since the principal measures of money flow that are indicated on the diagram relate directly to the volume of flow (*i.e.*, wages, interest payments, dividends, *etc.*), the question of the velocity of circulation of demand deposits is largely eliminated—although, of course, such data serve as a useful check against other figures. The problem, in any case, is one for skilled statistical estimates and adjustments between factors, rather than of absolute accuracy in figures.

In the actual computation of the money flow, it is necessary to make a variety of special adjustments which, for our present purposes, can be suggested only in rough outline.

Payments of corporation interest and dividends from accumulated surpluses ordinarily constitute elements of credit expansion, as do borrowings for such purposes or for plant additions. On the other hand, retirements of corporation debt from earnings become elements of credit contraction.

Governmental agencies may conveniently be looked upon as equivalent to public service corporations. Taxes paid by individuals, as such, may be treated as payments for direct consumer services, while taxes paid by producers and distributors may be treated as the equivalent of those bills for freight and for manufacturing power which enter into the cost of manufactured commodities. Similarly, increases and decreases in public debt, like similar changes in the debt of public service companies, constitute expansions and contractions of credit which operate to vary the total money flow.

As a final important special adjustment, international credit and trade relations may most conveniently be handled by treating the outside world as a separate single entity. Here our analysis will indicate that conditions of optimum balance and of full domestic activity may exist with any stable condition of trade interchanges. Stabilized "adverse" balances will represent a flow of income supplemental to the domestic flow and expended for a net total of foreign goods and services to augment domestic consumption. Stabilized "favorable" balances will represent a portion of the flow of domestic income (frequently interest payments by corporations) which is expended for a net balance of domestic goods and

services put at the disposal of foreign consumers. Expansions and contractions of foreign credit have effects generally similar to corresponding expansions and contractions of domestic credit. These adjustments for international exchanges do not, however, fundamentally affect the nature of the balances to be studied, and our further discussion may perhaps be simplified by confining ourselves to the application of the diagram to what is assumed to be a wholly domestic economy.

At this point it may be well to clear ground further, by emphasizing the fact that suggestions made for the treatment of specific items do not imply that, in the actual statistics, it will always be possible to deal with such items directly or in detail. In most cases it will be necessary to deal with aggregates rather than with individual items; and in many cases even such aggregates must be estimated from relevant indices, some of which may apply only indirectly to the totals required. Outside of the theoretical picture which the diagram supplies, its major usefulness should, in fact, lie in so balancing and cross-checking incomplete statistics and statistical indices as to give a total result which is much more dependable than any of its parts.

Concept of Spending Habits

With our analysis thus narrowed and qualified, we come next to the concept of "spending habits." This concept, in itself, is not novel, but the controlling position assigned to this factor in the diagram requires some explanation.

Under the conditions of optimum balance, to which reference has previously been made, the receivers of returns on capital investment will spend such returns in definite and only slowly changing proportions for nondurable consumption goods, durable consumption goods and capital goods. We may define these several classes of goods in any convenient manner, and then compute, in terms of such definitions, the corresponding percentages of capital return which will be applied to purchases in each category. And, in a similar manner, we may determine the spending habits of receivers of rents of natural resources, and of the receivers of wages, salaries and other returns for personal service.

The special significance of this concept of spending habits is that such habits not only result from and characterize each stage of economic development, but appear to be, even more importantly, the influences which determine a gradual reapproach to the optimum economic balance after a depression has taken place. The population that once has grown accustomed to certain standards of housing and household equipment, to telephones and electric light, and to radio sets and automobiles, may be counted upon in due course by insensible, but very powerful, processes to reorganize and rebalance its energies after each crisis so that the same comforts and luxuries may again be enjoyed.

Artificial restrictions on the free play of economic forces may delay this process, and protraction of the depression may to some extent dull the popular expectation, if not the popular desire, for luxuries. But productive efficiency will increase rather than diminish, and with a normal volume of employment once restored, even at somewhat reduced working hours, the plain arithmetic of the situation will require an increase rather than a decrease in the proportion of our total

activities devoted to the production of luxury and durable goods.

The current counsels of defeat, which would urge us to prepare for permanently lowered standards of living, do not represent even the economically easiest path. If by some chance we wished to do so, it would, in fact, be a matter of very great difficulty to rebuild our economy and readjust our spending habits to the scale of living that was current even a short generation ago. All the forces of established habits and desires, and all the influences of our established economic mechanism will work toward the reestablishment of a close approach to the balance and character of economic activities that obtained in the more normal years immediately preceding the depression.

In this basic tendency toward a return to the pre-depression balance of activities, the dominant factor is that of capital-goods activities, with which, for our present purpose, we may include the production of that special class of durable consumption goods represented by housing facilities.

For such activities, a normal expenditure in the pre-depression period was, perhaps, 12% of the national income. The importance of this item lies, however, not so much in its absolute magnitude, as in the fact that it is the major variable in our economic system, and is responsible in the main for those expansions and contractions of credit which are reflected in general changes in purchases and purchasing power. As our economy is now organized, it is roughly correct to say that the index of general activities will lie about half way between 100% and the index for construction and capital goods activities. For example, at the present time, the index for the latter item stands, perhaps, at 20% and the general index at about 60%. Furthermore, this relation is not a mere correlation. The cause and effect relations are direct and obvious. Effective credit expansion increases general purchasing power, and credit contraction decreases it. It is necessary to note, however, that it is not a single operation of credit expansion, but a continuing succession of such operations that is required to maintain an active flow of construction and other capital operations. Each repayment of a previous credit must, in general, be offset by an equal extension of new credit, if continuous activity is to be maintained.

Questions Raised Concerning Economic Balance

With the preceding consideration given the details of economic balance, it may be of interest to list a variety of questions that are suggested by the general diagram.

What may be the variations in spending habits in depressions of varying intensity and in the different phases of depression? To what extent do variations in the absolute volume of money flow produce forced changes in spending habits?

What may be the maximum secular change in the relation of consumption-goods to capital-goods activities during the period of a single business cycle—or, in other words, what new balance of factors may have to be worked out after a depression of maximum intensity?

What is, in practice, the maximum real surplus of construction and productive equipment that may accumulate in a period of overexpansion and how persistent may be the effects of such surpluses in retarding recovery?

What effects have variations in the distribution of the national income on

the volume of capital-goods operations, and on the processes of depression and recovery?

May major depressions tend to pass a critical point of decline below which ease of credit and lowered costs of construction fail to bring their usual response in renewed activities by private enterprisers? If a critical point may thus be passed, how protracted may be the subsequent processes of revival, and under such circumstances will it be humanly possible to await a natural recovery? If it should be necessary to resort to an artificial stimulation of activities, what method of stimulation will most adequately relieve distress and most certainly conduce to an early restoration of normal and self-sustaining economic balance?

The answers to all the preceding questions may, I believe, be greatly facilitated by checking and cross-checking our analysis within the framework of the suggested diagram. To attempt to answer them in detail in this article would, however, involve a discussion far beyond the possible limits of the present paper. The most that can be done is to suggest very briefly my own rough conclusions.

Variations in Spending Habits.—The variations in spending habits in times of crisis and depression are necessarily a composite of factors. The first impact of a crisis brings a sudden check to projects for new capital operations, although the completion of work under way may maintain for some time a substantial volume of such activities. That portion of return on capital, and of rents, which would normally be applied to new capital investment, is largely diverted to debt reduction, or accumulates in cash reserves, or is invested in existing securities rather than in new enterprises or expansions. The resulting decline in general activity reduces employment, and this reduction, together with the fear of further reductions, brings a rapid decrease in expenditures of salaries and wages for purchases of luxuries and durable consumption goods. Finally the continued progress of the depression may establish a vicious circle of debt deflation, combined with reductions in interest and dividend payments, to reinforce the psychological factors.

The whole process is too well known and too apparent, even to superficial observation, to require detailed description. The significant result is, however, a swing of the various production indices substantially in company front, with the basic necessities as a pivot and with the various items of construction and capital goods at the far end of the line. The consumption of wheat flour declines, perhaps, 10% or less, while at the other extreme, residential building may drop practically to zero in a depression of major intensity.

Our statistical data as to these various indices do not cover adequate periods to make our conclusions wholly certain, but, barring minor variations, the evidence is that, in practically all depressions, the relative movement of the various indices follows a somewhat similar pattern. In fact it would appear that, with substantial accuracy, we may determine the indices for electric power, or automobile production, or for total production, if we know only the position of our index for general construction. Furthermore, short of absolute chaos, it seems that we have fallen to economic zero when our index of residential construction stands close to zero and our index for general construction at about 15%. These natural and persistent relations among our

production indices, it is needless to say, serve as a very important and useful check on our estimates of variations in spending habits from period to period.

Relation of Consumption Goods to Capital Goods.—Turning now to the secular trend in capital-goods activities, such trend is modified very greatly by the fact that perhaps more than 50% of such activities represent reconstruction and necessary replacements, rather than net additions. If, therefore, 12% of the national income was the normal pre-depression measure of such activities, a decrease of one-half in the rate of net additions would still leave a new normal of about 9%. It would seem, then, that we should incur no risk of creating new excesses of capital goods and new economic unbalances with a post-depression revival of physical volume of these activities to at least 75% of the pre-depression normal. This in turn would correspond roughly to an index of 87½% for general activities—from which point further progress should tend to establish a final balance of the factors, with total construction and capital-goods activities at some point between 75% and 100% of the old levels, or even possibly at a higher level. In any case, there seems to be little justification for the feeling that permanent revival will require a drastic shift in the pre-depression relations between consumption-goods and capital-goods activities.

Excess Construction Overestimated.—The excess of capital goods and construction at the beginning of the present depression has been greatly overestimated. Certain surpluses are always apparent rather than real, and many actual surpluses are normal in a growing economy and do not constitute real excesses.

Practical full capacity in industrial operations is only from 70% to 80% of theoretical full capacity. Constant natural shifts in markets, labor supply, *etc.*, involve the partial or complete abandonment of many plants, or their conversion to new uses, or their reversion from quantity production to limited, specialized quality production. Much of this is no more a true waste than is the constant breaking down and rebuilding of the parts of a living organism. The vigorous organism wastes the most—the dying organism has no energies to waste. Total wastes of industrial equipment, in any case, probably do not exceed 1% or 2% of gross output. Such waste is not of critical importance. It is much less serious than those insidious wastes which may result from present efforts to maintain the profitable operation of moribund plants. Finally, also, the specialized fixed equipment of industrial plants represents only about 25% of total investment, or, say, 12½ billion dollars. This depreciates at the rate of from 10% to 25% per annum, while the maximum real excess of such equipment in 1929 probably did not exceed 10%, or 1¼ billion dollars.

Railroad and public utility construction is rarely at a rate in excess of that required to provide for current demands and leave necessary working margins. Such surpluses of facilities as now exist are only in insignificant part true excesses and should rapidly be absorbed by a general revival of activities.

Building construction had completed a major cycle prior to the depression and was declining in 1928 and 1929. However, the only serious excesses of such construction were apparently in hotels, high-class apartment houses,

and commercial office buildings. These excesses, even with a pronounced business revival, may require several years for their absorption. On the other hand, residential construction did not run to great extremes, and there already begin to be indications that a renewed shortage now exists and would become very evident with any renewal of full employment and business activity.

As a whole, therefore, it would seem that there are today few persisting real excesses of construction and capital equipment that should stand as barriers to the restoration of an economic balance closely resembling that of, say, 1926. The adjustments required in the ratio of capital- to consumption-goods activities should, in any case, be covered almost automatically and with adequate rapidity, in any general uptrend of business, by the obsolescence and depreciation of excess equipment and the diversion of activities into new channels. The one serious excess is probably in agriculture, and final relief in this respect would seem possible only as the sequence to general industrial revival and an accelerated transfer of rural population to urban occupations.

Distribution of National Income.—Turning next to the effects of variations in the distribution of national income, the diagram of balance very clearly indicates that a true and economically effective balance may obtain with any established and only slowly changing relation among return on capital, rents, and returns for personal service. The dangers of harmful unbalance do not lie in the nature of the distribution, but in violent changes. The normal return to capital which obtained in the period of 1909 to 1914, when corporation dividends and interest (excluding intercorporate duplications) amounted to little over 9% of the national income, was disturbed by the war rise in prices, and this ratio dropped to a little over 6% in the 1919 to 1924 period, only to rise again to the 9% figure at the end of 1928, with an overrun to about 10% in 1929. It was not this rebound of corporation earnings to normal real levels which brought about the 1928–1929 unbalances, but the speculative fever which resulted from such rebound. During this speculative period, corporation surpluses were perhaps the sanest of all money—and the wholly insane money was salaries and wages, plus related stock-market credit. The facts in this respect were obvious to anyone who was in close touch with the extravagances of the 1928–1929 period. Furthermore, as a longer view of this same problem, it is a relatively simple matter to show that the maximum total of all corporation profits in excess of normal interest on actual investment averages less than 3% of the national income. To determine just how much less such excess may be, after allowance for all losses, is a very difficult matter, but much qualified opinion holds that there are no actual profits, and, in fact, that real money invested in corporation equities earns, on the average, substantially less than 6%. If this be true—and the burden of proof is quite properly on those who would claim the contrary—then all current action and proposals based on the possibility of forced reductions in profit margins and corresponding increases in wages would seem to be fundamentally fallacious.

Increasing Sensitiveness of Economic System.—As a final point, we may now consider what is perhaps the most critical of all the problems raised by our studies of economic balance. There is some ground for believing that our economic system has become, year by

year, more sensitive as the result of its increasing efficiency and the corresponding devotion of a greater proportion of our energies to the production of luxuries and of capital and other durable goods, the consumption of which may be drastically curtailed in times of crisis. There is also some reason to believe that, when this increasing sensitiveness is combined (as in the present instance) with a special "conjuncture" of prior conditions, a depression once initiated may cumulate upon itself in a very unusual and extreme manner. Under such circumstances, the general curtailment of activities may create apparent surpluses of industrial equipment, housing, and other construction, which will stand as a definite barrier to that revival of private capital operations which to some extent initiates, and to a much larger extent sustains, the processes of business recovery.

In the present depression, capital-goods operations have fallen to under 20% of normal, and the residuum of such activities has seemed to represent a practical zero in new enterprise, with demand limited to unavoidable requirements for repairs and replacements. For previous, somewhat comparable depressions, on the other hand, the indications are that capital-goods activities have not fallen appreciably below a 50% level. Under such circumstances, the apparent surpluses of industrial equipment and construction did not operate to prevent a reasonably prompt and active response of enterprise to ease of credit and lowered costs of capital goods, whereas in the present depression, enterprise has recoiled from the seeming magnitude of overequipment and overbuilding, and has failed almost wholly to utilize the ample credit that has been available to sound borrowers.

Conclusion

It may be that present conditions are exceptional, with little chance that they will repeat themselves in the future. But it may be, also, that our economy is, in fact, growing in sensitiveness to major disturbances, and that each future depression will carry with it the threat of decline in activities to a point from which natural recovery may not take place by elastic rebound, but must tend to come, instead, by slow, and perhaps humanly intolerable, processes of economic reëvolution. And it may be, furthermore, that, when the history of the present depression is finally written, we shall find the source of some of the major difficulties of this period in the natural reluctance of our most skilled and competent economists and financial experts to recognize that the passing of such critical point in depression had created a wholly new economic situation requiring new measures for the positive control and direction of the processes of recovery. We shall, perhaps, lose our economic freedom at the hands of economic doctrinaires, through failure of its proper defenders to realize in time that the starting battery of our economic machine had gone dead and needed recharging. This possibility I suggest, at least, as one of major importance in our future studies of economic balance, and the importance of sound planning for future major depressions will not be reduced by the fact that present misdirected efforts to force revival may have so tangled our economy that the safest immediate path may be to grin and bear it, with adequate measures for direct relief, until recovery finally comes.

A QUANTITATIVE STUDY OF ECONOMIC BALANCE

By RAGNAR D. NAESS

A quantitative study of economic balance is of interest because it throws light on the workings of our economy and enables us better and more realistically to evaluate its position at any time. The practical application of such a quantitative study, however, can be of real value only if interpreted in the light of the larger perspective of fundamental long-range tendencies which dominate our economy in this generation. Against this broader background a quantitative study, even though approximate and subject to errors because of inadequate data, furnishes a sharp tool which not only helps to clarify the current position of American industry but, more important, points to the most probable future course of events. It is obviously impossible to obtain accurate figures for economic balances. However, a profit economy based on exchange of commodities in an unknown market depends upon automatic safeguards of operation through forces of supply and demand, prices, volume of production, credit and profits, and is subject to marked fluctuations as a normal characteristic. Therefore, although the errors in quantitative measurements of economic balance may be considerable, the maladjustments that are being subjected to study generally exceed the error of measurements.

In discussing this entire problem, I shall first touch upon the philosophy behind the practical application of the quantitative analysis of economic balance, then mention in general the method used in arriving at the estimates and the sources of data, next show briefly the quantitative changes in our economy that took place in the post-war period, discuss in some detail some of the profound economic forces which bear on our present-day position and without which it would be impossible to draw correct conclusions from the quantitative analysis, and lastly give an interpretation of the present situation and the near-term outlook as derived from this study.

Basic Premise of Economic Balance

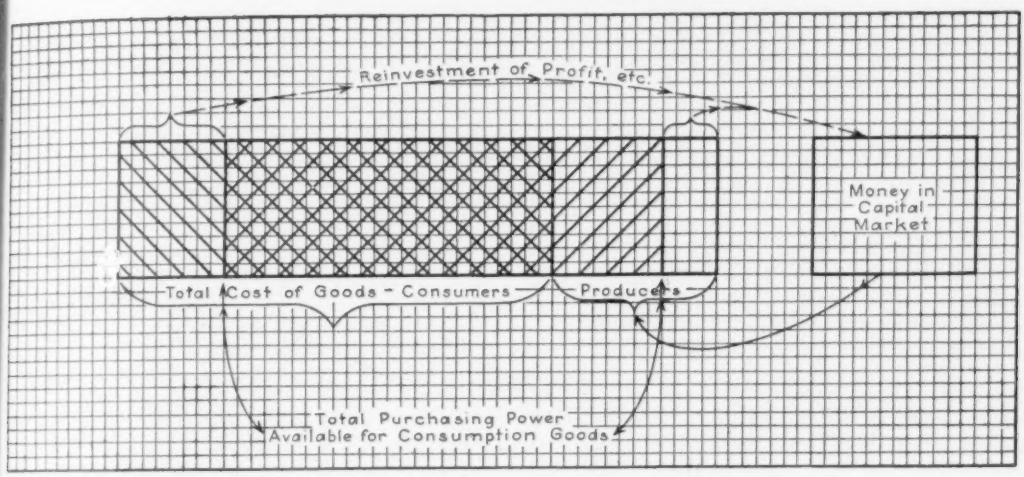
I shall first touch upon the major basic premise of this study which covers the post-war period. We produce two major classes of commodities, consumers goods and producers goods. Consumers goods, of course, also include consumers services. Consumers goods and services can be divided into two major categories: goods bought for cash, such as foods, textiles, tires, tobacco, gasoline, domestic electric power, domestic telephone service; and those bought through extension of consumer credit, such as automobiles and residential building. For convenience, I classify the first group of these products as consumers goods and the second class as consumers capital goods. From this point on I shall include consumers services with consumers goods. Producers goods range from locomotives and high-speed machine tools to commercial and utility buildings.

Normally, in the production of all types of goods and services a certain amount of funds are withdrawn from circulation for reinvestment in plant

and equipment, and the remainder is directly available for the purchase of consumers goods. This is true in the production of consumers as well as producers goods. Consumers are able to absorb the entire output of consumers goods only because the purchasing power originating from consumers-goods production is augmented by the purchasing power originating from the production of producers goods. This is illustrated by Chart I. The augmentation of purchasing power from the producers-goods industries makes it possible for the consumers to take off the market the entire output of consumers goods. It is illustrated by Table I which shows the condition of exact balance.

Chart I. The Flow of Purchasing Power through Our Financial System

THEORETICAL DIAGRAM OF BALANCE


Reinvestment of Profit, etc.
Money in Capital Market
Total Cost of Goods - Consumers
Producers
Total Purchasing Power Available for Consumption Goods

Without this increment of purchasing power from the producers-goods industries, consumers could not take off the market the entire output of consumers goods, and the profits and savings arising from production would stagnate in the banking system as cash or at best would be used for extension of consumer credit until a breaking point was reached. An expanding rate of output in producers-goods industries is therefore necessary for any increase of consequence to take place in output as a whole. We are all familiar with the old axiom that a rising bond market, a high rate of new security flotations, and large volume of construction mean rising prices and good business. This holds good over a

Table I. Circulation of Funds in Our Economy
Simplified Schematic Outline

(In billion dollars per unit of time, such as a year)

Total Value of Production for the Market..	100
Production of Consumers Goods and Services	80
Reserves, Profits and Savings Not Spent for Consumers Goods.....	15
Available for Purchase of Consumers Goods.	65
Production of Producers Goods and Services	20
Reserves, Profits and Savings Not Spent for Consumers Goods.....	5
Available for Purchase of Consumers Goods.	15
Purchasing Power Available for Consumers Goods.....	80
Production of Consumers Goods.....	80
Balance.....	
Funds for Reinvestment in Producers Goods	20

period of a year as well as over a period of twenty years.

If the rate of reinvestment in producers goods slows down or loses balance with the output of consumers goods, so that consumers are not supplied with the necessary increment of purchasing power from producers goods, consumers debts will rise, and inventories will begin to accumulate in the hands of manufacturers and distributors. Manufacturers will then trim their production quotas, retrench their programs for plant expansion and begin to scale down working forces and wages. The lower purchasing power from reduced operations affects the rate of activity, and a deflationary spiral is on the way. Liberal credit expansion and overextension of plant before the decline intensify the subsequent events. When prices and production have been finally reduced to levels where even the much lowered purchasing power enables the consumers to remove the current output from the market, and when the manufacturer by reason of profitable expansion into new markets or by wear, tear and obsolesence begins to invest in new plant and equipment, the basis is laid for stabilization and recovery. This is the basic premise in the quantitative study of economic balance.

Methods Used in Arriving at Estimates

I shall next take up the method used in arriving at the quantitative data of economic balance.

The total value of product for the market by years since 1919 can be obtained by building up an income statement including total wage and salary payments, pensions, dividends, interest, rents and royalties, individual and partnership profits and net agricultural income. These figures can be checked by employing the different approach of adding the net census value of manufactures, the gross mark-ups in retail and wholesale trade, construction, transportation, electric power and light, telephone and telegraph, and other services. In carrying out the latter method, it is necessary to guard against duplications. For example, manufactured products going into construction industries are already included in the figures of the Census of Manufactures and must, therefore, be eliminated from construction; only the gross mark-ups in retail and wholesale trade and other service industries should be included, since the costs of merchandise are already in the data for manufacturing and transportation.

Yearly estimates of the value of the output of consumers goods since 1919 can be made by deducting from the total value of product the yearly value of producers-goods production, which can be obtained by similar methods: a consideration of the problem from two points of view—value of producers goods from manufacturing, construction, *etc.*, or investments of capital by corporations through reserves, by individuals through savings and profits and new capital issues. These estimates should check approximately.

These steps give annual figures for the period 1919–1930 of the total value of product, of the value of producers-goods production and of the value of output of consumers goods, excluding duplications.

Over a long period of time, the total purchasing power available with which to take off the market the total output of consumers goods must necessarily equal the production of consumers goods after making allowance for net exports. Selecting 1919–1930 as a base, the average yearly value of consumers-goods production over those twelve

years must equal the average yearly purchasing power for consumers goods over that same period.

The Census of Retail Trade for the year 1929 furnishes a basis for dividing the consumers-goods production into two main branches—those goods purchased for cash and those largely on the basis of credit, named in this study consumers capital goods. Applying the ratio to the average 1919–1930 output of all consumers goods, the average values for the production of consumers goods and consumers capital goods for that period can be determined.

By this procedure five basic figures have been arrived at, namely, the average dollar output during the period 1919–1930 in the United States, of all goods produced, of consumers goods, consumers capital goods, producers goods, and the average purchasing power available for consumers and consumers capital goods.

In order to translate these figures into monthly estimates several steps are necessary. First, volume of production indexes, properly weighted and deseasonalized, must be constructed for consumers goods, consumers capital goods and producers goods; secondly, price indexes, similarly treated, have to be compiled for the same groups of products; thirdly, the volume and price indexes must be combined into indexes of values and applied to the respective average 1919–1930 base figures. These additional steps give monthly dollar production figures of the three branches of our economy expressed as yearly rates. Finally, monthly estimates corrected for seasonal variation can be made for the various components of purchasing power, namely, wages and salaries, net agricultural income, interest, dividends, rents, individual and partnership incomes, less new capital issues. The total of these give monthly estimates of total purchasing power for all consumers goods which can be compared with the monthly rates of output of these goods.

Standard sources were employed for all data. The Census of Manufactures, the Census of Construction, the Censuses of Wholesale and Retail Trade, the Statistics of Income of the United States Treasury Department, the Department of Labor, the Federal Reserve Board, the F. W. Dodge Corporation, the Interstate Commerce Commission, and publications of the National Industrial Conference Board and the National Bureau of Economic Research are among the most important.

Quantitative Changes in American Economy, 1919–1933

A few words about the magnitude of these figures and their fluctuations since 1919 may be pertinent.

During the period 1919–1930, inclusive, goods were produced for the market averaging about $70 billion a year, out of which $42 billion were consumers goods; $13 billion, consumers capital goods; and $15 billion, producers goods. In other words, during this period 78% of all goods was produced for sale directly to the consumer and 22% represented investments in plant and equipment.

A notable feature of the period was the enormous increase in the output of consumers capital goods sold on credit in relation to the other main branches of American economy. Our prosperity was in large measure one of automobiles and residential building. Comparing the peak years 1920 and 1929, the rate of output of consumers capital goods increased by two-thirds as against only somewhat over 10% for consumers and producers goods. At peak rates of

production during the summer months of 1929 we were turning out consumers capital goods, largely automobiles, residential building and furniture, at a rate not far from $20 billion a year compared with $13 billion a year at the peak rate of the 1919–1920 period; while the rate of producers-goods output at the peak in 1929 was somewhat over $20 billion a year as against approximately the same in the 1919–1920 period.

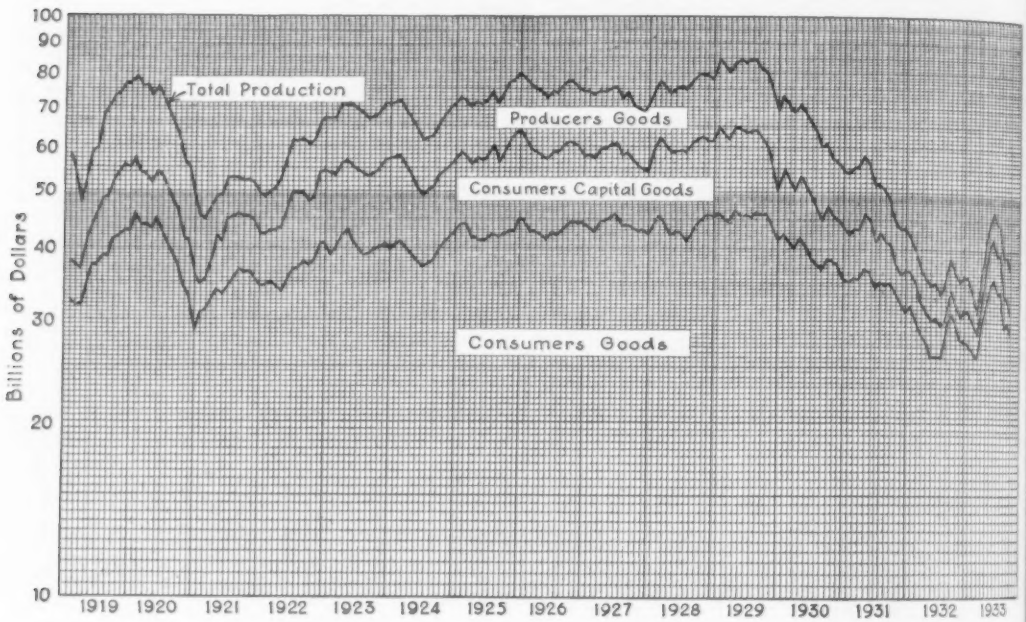
The output of consumers goods was, of course, relatively steady as compared with that of consumers capital goods and producers goods. During the period 1919–1930 the output of consumers goods fluctuated between $29 billion and $47 billion a year; of producers goods between $7 billion and $23 billion; and of consumers capital goods between $4 billion and $19 billion.

It is worth while to consider the various important segments of the post-war period, the data being given in Chart II. In considering these data it must be borne in mind that they are all in dollar terms, giving effect to changes in the price level.

During the boom of 1919–1920, lasting somewhat over a year, output of consumers goods rose by one-half; that of consumers capital goods nearly tripled and producers-goods production doubled. The period was one of large-scale expansion in commercial credit, moderate expansion in long-term credit, high rates of wage and salary payments, boom agricultural income, and a favorable balance between purchasing power and production of goods bought by the consumer.

The depression of 1921, when American industry declined for only a little over a year, reduced the output of consumers goods by approximately one-third, and reduced the output of the other major sections of industry by nearly three-quarters. These declines

CHART II. VALUE OF TOTAL INDUSTRIAL PRODUCTION
Billions of Dollars—Yearly Rate



took place with a pronounced liquidation of commercial bank loans, with hardly any decline in long-term credit, and with continued high rates of wages and salaries, but with a serious decline in agricultural income.

The recovery after the 1921 decline came with swiftness in contrast to the recovery in foreign countries. Within a little over two years consumers-goods production increased by one-half to a point not far from the 1920 high rate; output of consumers capital goods increased three and one-half times, and producers-goods output more than doubled. The recovery was accompanied by large-scale long-term financing, by relatively continued high rates of wage and salary payments and by considerable recovery in net agricultural incomes, but not by any important increase in the use of commercial credit.

A moderate recession took place during 1924, particularly in the output of consumers capital goods, after the very high rate of production in that field during 1923. From 1924 to 1925–1926, production of consumers capital goods climbed to new high levels, with automobile production and residential building furnishing the major impulse to our entire economy and with new long-term financing and reinvestments into new plant and equipment at a rapid pace. No expansion took place in commercial loans; speculative loans on securities began to bulge larger, and wage and salary payments were at a high rate. But the sharp increase in consumers capital-goods production exhausted for the time being further expansion possibilities, and a recession took place in 1927, quite pronounced in residential building and automobiles and less so in producers-goods industries.

Investments in the producers-goods industries continued at the high rate, and from 1927 to 1929 we witnessed the speculative boom which is now an old story. Industries of consumers capital goods and producers goods increased their production from a rate of about $26 billion a year in the fall of 1927 to $40 billion a year during the summer of 1929; this was accompanied by a moderate increase in commercial loans, continued heavy long-term financing, an enormous increase in speculative loans on securities, some increase in the rate of wage and salary payments, and a slight decline in the rate of agricultural income. In the summer of 1929, production of consumers goods far outstripped consumption; the rate of reinvestments in plant and equipment was enormous and speculation rampant. The bubble burst after many months of continued and marked lack of economic balance.

The period of 44 months from July, 1929, to March, 1933, witnessed the most colossal deflation that has ever taken place anywhere. During that short span the value of output of all commodities produced for the market dropped from a yearly rate of $85 billion to $31 billion, or by 64%, and credit during a substantial part of this period contracted at a rate averaging half a billion dollars a month. In the last four years the annual rate of production declined $54 billion; in 1920 it dropped $34 billion in a little over a year. In March, 1933, production ran at a rate of $13 billion a year below that of January, 1921, the low point in the 1921 depression.

Production of consumers goods declined from $46 billion a year in the middle of 1929 to $26 billion a year in the summer of 1932, a rate of nearly $3 billion a year below the low point of

December, 1920, eleven and a half years earlier. Production of consumers capital goods declined 90%, from $19 billion a year during the spring of 1929 to $2.2 billion a year in the fall of 1932 when it was roughly one-half of the rate of January, 1921, the low point in that depression. Producers goods fared no better, dropping from $21 billion a year, at the 1929 peak, to $2.5 billion a year in April, 1933, when production of this type of goods was running just over one-third of the September, 1921, rate. In the summer of 1933 our economy operated nine-tenths on consumers goods and one-tenth on producers goods.

Our total wage and salary bill, at the bottom in March, 1933, had been cut by $30 billion a year. These payments shot by the 1921 low point of $35 billion a year in their downward course in the summer of 1931, and at that time had completed barely one-half their decline. The farmers who for years had received no more than a nominal cash return for their labor had only a few hundred million dollars left after their expenses during 1932.

A few more figures may be of interest. The drops from yearly peak rates of wages and salaries to bottom rates in 1932 or early 1933 were: in *manufacturing* from $16 billion to $5 billion a year; in *construction* from $3 billion to $350 million; in *mining* from $2 billion to $400 million a year; in *utilities* from $1.5 billion to $1 billion; in *trade* from $8 billion to $4 billion; and in *transportation* from $4 billion to $2.5 billion. Some of these declines are in sharp contrast to the 1921 experience when wages and salaries in mercantile industries and utilities were not affected, and transportation, mining and construction showed only moderate declines. Wages and salaries paid in service industries continued to rise throughout the 1921 period.

Environmental Changes Affecting Our Economic System

What are some of the fundamental causes of this unparalleled and incredible catastrophe that brought in its train an increase in unemployment of between 2 and 4 million in 1929 to 15 or 17 million in 1932, and placed the very question of the survival of our economic system in the forefront of the minds of many? How can we explain that the period of relative high rates of production of the twenties should be followed by a spiral of deflation that spent itself only after placing our economy in a virtually paralyzed condition and that even now is being fought only through the greater and greater use of unorthodox methods?

To answer this question intelligently and realistically, an economist today must necessarily recognize the deep-rooted changes that have taken place in the conditional environment of our economy in the present period as compared with the pre-war decades. We can observe today social, economic and cultural consequences of these changes in every major industrial country of the world. The very enormity of the cataclysm that has embraced world economy during the last four years speaks eloquently for these new conditions, which have raised fundamental issues in sharp contrast to the old established principles which brought industrial civilization to its present high stature of technical organization and skill in supplying our basic needs. Economic nationalism, trade wars, tariff barriers, depreciation of exchanges, and inability of nations to solve in common even elemental problems vital to their self-preservation are some of the impor-

tant surface indications of the lessened ability of our economy to meet new and powerful world-embracing forces.

Without attempting to sketch in detail these social and economic forces, I shall touch upon some of the major environmental changes in the economy of the United States, without which it is impossible to interpret quantitative data of economic balance or to gauge the longer or short-term outlook for the major branches of our economy or individual industries.

First, our economic structure is built upon the cornerstone of free interplay of economic forces and automatic adjustments arising from the production of commodities for an unknown market that regulates the entire production apparatus through changes in prices, credit, output, wages and profits. The philosophy of *laissez faire* and "the Devil take the Hindmost" was peculiarly successful under the environmental conditions of the nineteenth century as a major force in stimulating the development of our productive facilities at an enormous rate of speed. In the course of a century this philosophy conquered our agricultural frontier and speeded up technical inventions and processes enabling us to provide an ever-growing population with the most marvelous facilities for the satisfaction of material wants. The rural population moving westward supplied the ever-growing demand for foodstuffs to a rising industrial population drawing its new markets from the relentless fight to stretch our domains to the west, north and south. It was an era of new construction on an immense scale to meet the insatiable demands of a continent under the liberating forces of changed social, economic and technological conditions. In the earlier part of the period, textiles, coal, canals, lumber, and railroad transportation were the giants that demanded new and greater capital investments to link farm and country. Later, steel and metals, automobiles, chemicals, electrical equipment and airplanes placed the economy on a new technological basis in providing the elemental demands of food, clothing and shelter.

These demands created the most fertile soil for individual enterprise, supplying and reinvesting capital to meet what seemed an incessant need for expansion. Since these conditions were a primary requisite for a healthy balance of forces in our economy, it met the tests of adverse conditions appearing from time to time with flying colors and functioned almost with the precision of a delicate piece of self-adjusting mechanism.

Environmental conditions have certainly changed greatly. That insatiable demand for new capital expansion on a giant scale which built a continent is largely a thing of the past. Remove the possibilities of large-scale capital investments either domestically or abroad, where the United States after the World War took a more aggressive rôle through the large-scale exportation of capital, and we also remove one of the most important conditions necessary for our form of economic structure to carry on successfully. This basic change alone is sufficient to explain many of our current problems. Superimposed and correlated are other changes of primary import.

The second important factor is the increased technical skill of a mechanized civilization by which production is carried on with relatively greater fixed charges in relation to flexible costs than formerly to yield the same output. As technique transcended old boundaries, the same volume of goods could be

turned out with very much less man power, but only by adding to fixed overhead and expenses. This process has been a fundamental characteristic of the last century, but in past decades no difficulties arose because the liberated man power found new avenues for efforts in fields requiring immense capital investment for their development. Present circumstances differ. June, 1933, saw a rate of production in manufacturing industries 10% higher than the average rate of 1919, and yet the number of wage earners employed was somewhat over five million as against nine million in 1919. While in former decades this man power found outlets in the exploitation of new markets requiring a healthy and consistent growth of capital reinvestments, we find today, except for a few dynamic small industries, that this man power has become a burden on our economy.

The relatively greater fixed charges in relation to man power per unit output also creates another problem. It diminishes the ability of our economy to affect the necessary adjustments under stressed conditions. The higher overhead and heavier fixed charges place the burden of cost reduction to a much greater extent on the flexible items, among which labor is the outstanding. This condition places a premium on the aggressive adaptation of labor-saving equipment which, while lacking the major stimulus of large-scale employment for new capital, yet intensifies the problem of an oversupply of man power. Fixed overhead and charges are today regarded as an impossible burden under current rates of production and the price level. An increase in the price level would unquestionably help debtors, assuming that conditions generally improved, but the problem is more fundamental. Total interest and rents rose from $13.9 billion in 1919 to over $25 billion in 1929, or nearly 100%, while the value of all goods produced increased by less than 40%. Quite independently of price levels or the volume of production, technological developments have added and continue to add to increasing fixed-expense burdens in relation to labor costs.

A third important change that we have witnessed in our economy since earlier days is the increasing difference in strength between that growing section of our economy dominated by large corporate interests and that still in the hands of the relatively much weaker small-scale, and particularly individual, enterprises. The effect of this development under present conditions is two fold. First, the increasing size, financial strength and backing; second, the growing interrelations and ramifications of corporate control over industry, hand-in-hand with the large banking units, further reduces the ability of our economic mechanism to adjust itself from a condition of overexpansion. This section of our economy is able to withstand adverse economic forces much longer than formerly when such strength was lacking. The outstanding producers with strong banking support continued to maintain prices, production, interest and dividend payments during the last four years under conditions that would have prohibited such a course of action twenty years ago. It is apparent that this entire tendency has further diminished the adaptability of our profit economy to storm conditions. The very strength of the corporate section of our economy contrasts sharply with the other section still on a basis of a *modus operandi* of decades ago. This contrast brings new problems and dislocations. Agriculture

building, retail and wholesale trade and banking are outstanding sections of our economy still in the pre-war state of development. Difficult trade conditions tend to place inevitable adjustments that are not carried out by the stronger sections upon these weaker branches with augmented intensity. Witness the more or less chronic condition of agricultural distress since the World War, the mortality among our small entrepreneurial retailers and the fate of the local country banks during the last four years. It is true that agriculture was profoundly changed by the War and by the post-war conditions of demand, but basically the plight of our agricultural communities must be traced to the inability of the millions of farmers to adopt aggressively those large-scale methods of production now dominating industry, essentially because of the character of our agricultural lands as they are split up into innumerable, small individual holdings.

One aspect of this fundamental and sharpening contrast is the marked dispersion in the declines of various prices in this compared with former depressions that have deepened the dislocations of industry. On the one hand, we find prices of those products dominated by highly mechanized, financially strong monopoly or semimonopoly organizations virtually unchanged and, on the other hand, the drastic declines of prices in those products yet under dominance of small-scale producers or under the aegis of weak corporations.

We must look upon the question of economic balance since 1919 and the trend over the next few years against the background of these profound modifications in the soil in which our economic philosophy and operating principles bore such fruits in past decades. They influence the life of everyone in the most vital fashion. The greatly lessened scope for large capital investments into new spheres of action, which limits the capital-goods industries to replacements from depreciation and obsolesence; the growing problem of surplus man power resulting from incessant application of labor-saving processes; the increased fixed charges in relation to labor cost per unit of output; and the growing contrast between the strong section of our economic fabric, dominated by a structure of interrelated corporate and banking giants, and that section still under the influence of past small-scale operating methods give rise to the problems of:

(a) Unemployment on a large scale, difficult to absorb.

(b) Excessive reductions in purchasing power which is basically determined by wages and salary payments.

(c) A solidification or "freezing" of the economic structure, seriously undermining its ability to weather the storms of cyclical depressions successfully.

Post-war Forces and Boom Conditions Leading to Economic Crisis

I shall next consider against this background some of the forces that enabled the United States in the post-war period up to 1929 to carry production to new high levels and to show the astounding recovery from the 1921 depression. We entered the post-war period with strong but artificial and temporary forces forming a firm basis for a high rate of production. These were: the post-war reconstruction of devastated areas in Europe, the satisfaction of the latent demand for commercial and residential building which had particularly suffered during the War, the reestablishment of the

plant and equipment in our railroad system on an efficient and modern basis after federal control, the rehabilitation of our manufacturing plants to conform to peace-time conditions and to a new standard of technical skill and management, and the continued rise of two great industries that were still at that time in their early period of development—automobiles and utilities—and the rebirth of another industry immensely important in war times—the chemical industry. These brought in their train the demand for auxiliary plant investments and the necessity of extending road building to create a vast highway system. Add to this the aggressive development of foreign markets aided by the conversion of this country to a leading creditor position, and we have the constellation of forces that gave rise to high wages and an unusually favorable economic balance during the period 1919–1929. It was not until 1928 that signs began to appear that the longer-time powerful and unfavorable forces were beginning to come to the fore. Nevertheless, the greatly altered base of our banking system with its flexibility of credit expansion permitted the continuance of the level of activity for more than a year.

The basic reasons for the seriousness of our present position seem clearer if viewed in this light. Fundamentally it is due to the longer-term forces affecting our economy that were temporarily overcome by the peculiarly favorable post-war conditions. Superimposed upon these forces we experienced, first, an unusually widespread speculative boom in every department of activity before the crash; secondly, an abnormal amount of price deflation because of the artificially maintained price plateau of the post-war period supported only by reason of the enormous rate of activity in those years; thirdly, a collapse of a credit structure pyramided to an excessive degree because of the great flexibility of the Federal Reserve System; and, finally, an extraordinary lack of liquidity in banking assets arising from the diminished opportunity for the exercise of commercial-banking functions and the necessity, therefore, on the part of bankers to place a larger and larger proportion of assets in semiliquid or virtually nonliquid long-term investments. The combination of the full force of the longer-time economic trends and the particularly overexpanded boom conditions of the twenties resulted in a crisis worse than ever before, which as yet has not been overcome by the normal adjustments of past experience.

Long-term Prospects and Immediate Outlook

A conclusion can be reached from this analysis that the longer-term prospects are not promising for a substantial recovery to pre-depression levels of activity through natural courses of events. The outlets for capital expenditures to be utilized for profitable purposes are relatively limited. Opportunities exist in a few industries, such as chemicals and natural gas. A revolutionary development of residential housing may possibly occur through application of the latest technological progress in the utilization and fabrication of metal products, permitting steel-alloy housing at a remarkably low cost. Even under normal conditions such a far-reaching change would require a lengthy period before becoming an important factor in view of the manifold problems of breaking down old habits and style resistances. Under present conditions, such a course of

events is further slowed up by its dependence as a propelling force upon consumer income. We are, therefore, left largely to replacement demands arising from wear, tear and obsolesence, the extent of which is greatly influenced by volume of production and profits from production of consumer goods.

It, therefore, seems reasonable to draw the conclusion that current government policies are not dictated by any motive to put theoretical opinions to practical tests but by force of economic and social circumstances growing out of the deep-going change in our present-day environment within which the old established principles of individual enterprise and automatic readjustments do not seem to afford a satisfactory solution of our problems. The aim of the efforts to substitute artificial for natural causes of recovery is to set in motion such forces as will accomplish three interrelated tasks; namely, the improvement of the extraordinarily low level of purchasing power, the injection of new life blood into the capital-goods industries, and the continued support of the existing debt structure. The immense funds spent flow in three major directions: to support already existing fixed charges and our banking structure; directly to consumers as a form of a dole; and finally for capital goods in the form of public works. The resulting increase in the federal debt is only in small part supported by investments in income-producing projects and hence represents an additional unsupported promise to pay, superimposed upon an already burdensome debt structure.

These and all other current government measures tend to augment the forces working towards further solidification or "freezing" of those forces that control the natural flow of economic change. Therefore, once embarked upon, these policies tend to be continued since even a slow retrenchment in their application would bring a period of jolts and readjustments to reestablish an equilibrium under the new conditions. Once the orthodox principle of "let nature take its course" is partly supplanted by attempts to control economic forces artificially, it is extremely difficult to turn back. Circumstances are, therefore, likely to force the Administration to continue indefinitely the establishment of increasing direct or indirect control of economic forces until our economy will assume some of the characteristic features of the major European industrial nations.

Let us now consider the immediate outlook in the light of these broad perspectives and in view of the current quantitative position of our economic balance.

A few figures will help.

TABLE II. ECONOMIC BALANCE—1932 AND CURRENTLY
(Figures in billion dollars)
Figures Denote Yearly Rates—Adjusted for Seasonal Variation

	Year 1932	March, 1933	July, 1933	Est. Dec., 1933
Production of:				
Consumers goods	28.5	25.5	35.6	27.1
Consumers capital goods	3.4	2.5	5.6	4.2
Total	31.9	28.0	41.2	31.3
Producers goods	4.6	2.7	4.5	5.0
Total	36.5	30.7	45.7	36.3
Purchasing power—consumer	31.3	27.2	34.1	34.0
Goods produced for consumer	31.8	27.9	41.1	30.8
Excess or deficit purchasing power	D 0.5*	D 0.7*	D 7.0	E 3.2

* These are within any reasonable error of the data so that an approximate balance existed at these points.

Purchasing power and the output of consumers goods were in relatively good balance during the year 1932 and

in the beginning of 1933, while capital-goods industries had been for some time in a completely deflated state. Our economy was ready for some recovery, however slight. Even the banking crisis did not have a great deal of effect upon the current rates of either production, purchasing power or prices. If the process of deflation had not been brought to a point of near completion, that event would have been accompanied by far greater repercussions.

The developments since March are very significant. The policy of the Administration brought an instant speculative reflection in production rates and prices of consumers-goods industries. Manufacturers were forced to protect themselves against the probability of much higher prices and the danger of inflation. It is notable that the rate of output of consumers goods rose so rapidly that in July it outstripped purchasing power by billions of dollars a year, while capital-goods industries remained in a dormant position. Accumulated inventories and excess production forced consumers-goods industries, particularly food and textile manufacturing, to reduce operations to a dollar rate in December, approximately 24% below that of last July, but still 12% above the rate of March. This decline in consumers-goods industries was not accompanied by a corresponding decline in producers-goods industries, which on the contrary have shown a moderate improvement since July. The most important, however, was the retention of consumer purchasing power in December at a rate only moderately lower than that of July. With the rate of production of consumers-goods industries down sharply, we find for the first time in many months an actual excess of purchasing power over the rate of production. This explains the continuance of relatively satisfactory dollar retail sales over last year during the fall months of this year.

The present position of economic balance leads to the conclusion that moderate business pick-up should occur in the spring of 1934. This conclusion is further supported by consideration of the enormous expenditures likely to be made by the Government for public works, the Civil Works Administration, loans to agriculture and the opening of banks, much of which are direct additions to purchasing power from normal sources.

Quite apart from the dangers of current government policy and the tremendous strength of the long-time underlying social and economic forces that will continue to carry us toward a state of increased government domination over industry and labor, there are good reasons to view the immediate outlook for business with more confidence than for some time.

THE PASSING OF THE OLD ECONOMIST

By WINTHROP M. DANIELS

THE Old Economist and his philosophy have been definitely superseded. He is as much an exile, scientifically speaking, as the White Russian in Paris or New York. Like them it remains his task to appraise, with what objectivity his background permits, the causes and nature of the change, without presuming to pass final judgment on the good and evil latent in the revolution.

True, the exit of the Old Economist was not as dramatic as that of the *intelligentsia* from Moscow. But there are various kinds of exits. There is the lamented exit as when "a well-graced actor leaves the stage." There is the exit dubitative, exemplified in Ian Maclaren's once famous query—"Should the old preacher be taken out and shot?" There is the remorseful exit like that of Shakespeare's Cardinal Wolsey, or of Milton's Adam and Eve expelled from Paradise. And there is the malefactor's exit where, before the trap is sprung, the condemned is generously allowed a parting word of exculpation or confession, to a world whose confidence he has betrayed. It is perhaps the last which best befits the Old Economist, so unexpectedly extruded from public confidence.

It must be recognized that there was a well-defined difference in the former prestige and influence which the Old Economist enjoyed in England as contrasted with his status in the United States. He never was accorded the same overlordship of economic policy in this country as in England. His persistent castigation of high tariff protection in America was anathema to the capitalistic upholders of "rugged individualism." His refusal to condone the price policies of industrial trusts left him "outside the breastworks" of Big Business. But his views upon sound money and the sanctity of contracts happening to coincide with the interests of the industrialists made him not entirely *persona non grata* with the world of practical affairs. He had been accorded a recognized professional rôle by some of our large banks and even by some of the major industries where public regulation of rates or wages required his expert assistance. In England, where also the Old Economist has been handed the bowstring, his rôle was formerly far more magisterial. As one of the new dynasty remarks, "Under a functioning *laissez-faire* system the economist had the best of two good worlds; the satisfaction which intricate and exact intellectual reasoning gives, and the equally pleasing but usually incompatible satisfaction of exercising power. It is a privilege hard to abdicate." But irrespective of the former status of economists here and elsewhere, they are at present all indiscriminately in Limbo.

An inventory of the assets of the economic philosophy so violently thrown into bankruptcy discloses what is now regarded as a curious jumble of bad paper and worthless securities. Evidently the Old Economist put an absurd reliance upon the "Invisible Hand" promoted by Adam Smith, as well as upon the "Profit Motive" sponsored by countless classical economists. There was a close connection between these two concerns. The basic

idea was that the most effective assurance of an adequate supply of such goods and services as society required was to permit each individual or association of individuals to determine for itself what to produce, and what would fetch a remunerative price in the market. This price, it was hoped, would afford a profit over costs. Each producer sought only his own interest in the process, and it was supposed or concluded that while thus seeking only his own advantage under the omnipresent stimulus of self-interest, he would be led as it were, by "an invisible hand" to pursue a line of conduct best contrived to promote plenty and cheapness for society as a whole.

The appraisal of these ideas by our new masters is quite disheartening, although it is conceded these assets once seemed to have some promise of value. Sir Arthur Salter in his *post mortem* kindly remarks that "none at least can withhold an honorable tribute at its passing to a system which sheltered hundreds of millions in a comfort known before only to as many thousands; and which decade by decade absorbed an increasing population and supported it at higher standards of living." The vice in the older view appears clear when we consider how much more satisfactory in providing society what it needs in appropriate amounts and at the proper place and time is the planned forecast of a Federal Commissar who charters enterprises to launch forth under predetermined wage-scales, hours of labor and price limits for its products. Similarly, we now recognize the superiority of an agricultural dictator who, in the interest of remunerative returns to the granger or cotton grower, determines how much acreage is hereafter to revert to waste.

Another dubious venture of the Old Economist was his ill-starred reliance upon a gold monetary standard. This obsession for "a yellow metal, originally chosen as money because it tickled the fancy of savages"[1] has now passed into the discard in favor of a "managed currency,"—an unrestricted reliance "on the conscious and deliberate regulation of the supply of money." The Old Economist, it is allowed, recognized that the purchasing power of a defined weight of gold, while more stable than other commodities from day to day, varied considerably from decade to decade. Even while it constituted the legal standard of money, the price level which was tied to it by an elastic cord would expand or contract sensibly by reason of the seasonal enlargement or shrinkage of bank credit. But the Old Economist seemingly attributed to the evolutionary survival of gold from among a ruck of commodities which had vainly essayed the task of serving as basic money an undeserved importance. He did not realize how mankind could be "crucified upon a cross of gold." He was oblivious to the perils of "goldhoggery." He was too distrustful of those with a debtor-complex who were always seeking to tinker with the basis of commercial obligations. He supported gold as the ultimate money of redemption because, whatever its infirmities, it at least excluded the danger of the monetary "meddlesome Mattie." When between 1914 and 1919 gold lost half its value, and the bond holder's real income shrank correspondingly and when insurance policies and savings bank deposits withered in relation to the costs of living, he suggested no

[1] *Money* by D. H. Robertson, M.A., Fellow of Trinity College and Girdler's Lecturer in Economics, Cambridge. Introduction by J. M. Keynes, M.A., C. B. Fellow of Kings College, Cambridge. Cambridge Economic Handbooks-II, p. 155.

arbitrary enlargement in the weight of the gold dollar. Government bonds which had been sold upon the specific pledge of repayment, both interest and principal, in gold coin of the then established weight and fineness seemed to him more than "a scrap of paper" which could be repudiated without a violation of the national faith. He refused "to wink at a little judicious use of the money pump, if the tires of industry seemed to be sagging unduly." The filched increment of gain which the export industry could temporarily steal when internal prices were artificially manipulated moved him not. In short, his economic senses were becoming atrophied and his ethos of trade showed signs of fatty degeneration.

The Old Economist had long ago given unmistakable signs of dotage in his surrender of some of the peripheral provinces of *laissez faire*. His acquiescence in or even his positive approval of a limitation of working hours, especially for women and children, may serve as an example. He had even managed to bestow a blessing on collective bargaining for wages. Compensation laws for injuries from industrial accidents had his approval, and even the prospect of old age pensions he occasionally surveyed with tolerant eye. It must be admitted that he never conceded that it was the duty of the government, either directly or through pressure upon employers, to provide jobs for the unemployed; and he was wont to be critical of the extensive use of a public works program as an appropriate remedy for the jobless. To take from the taxpayer money that he could ill afford, in order to create for his supposed benefit things that he did not want, and at a cost higher than should normally be incurred, remained to the end among the Old Economist's antipathies. Not that he disavowed the moral responsibility of the State to relieve the distress of the hopelessly indigent, but that he disapproved the means employed as needlessly wasteful. The partnership officiously proffered by government to business never seemed to attract his favor. It was suggestive of Doctor Johnson's "patron," who had looked "with unconcern on a man struggling for life in the water, and, when he has reached ground encumbers him with help." The Old Economist's mind dwelt among the legends or the histories of the past. When he thought of government's asking business how it could help, he was reminded of Diogenes' reply to Alexander's similar question,—"stand out of my sunlight." When he contemplated official oversight of manufacturing, he would recall Colbert's elaborate decrees regulating the exact number of strands of warp and woof that were to be embodied in French textiles. In short, he was hopelessly dwelling among the cobwebs of the past of forgotten men. It was clearly time to move on,—from the dark past of Mercantilism to the shining promises of *Moratoria*.

The final push that displaced the old economic philosophy must unquestionably he ascribed to the speculative crash of the fall of 1929 and its aftermath. There have been crises, panics, bankruptcies and hard times before this in human history, although our insistent present sufferings will hear of them with but scant patience. It is of little use therefore to refer back to these forgotten landmarks in social experience to a generation which, on the whole, adopts Mr. Henry Ford's theory that "history is bunk." When the question of "what to do about it" was proposed to the somnolent Sphinx of the old economics, the answer vouchsafed was

little else than a suggested reliance on the *vis medicatrix naturae*, the slow, automatic, competitive adjustment of disrupted price levels and a curtailment of government waste. If it was deemed essential to apply a mild lenitive, he had little in his pharmacopoeia to suggest other than a reduction in the prohibitive rates of tariff duties which along with the new nationalism had strangled foreign trade. To the ardent proposal that artificial means should be taken by government to bolster agricultural prices up to a level with those of protected manufactures, he calmly opined that the fundamental remedy was to remove the artificial props under the latter. To the suggestion that foreclosure of farm mortgages be postponed by stay laws, he had only the weak rejoinder that two-thirds of the farm properties in the United States were quite unencumbered by mortgage liens and that the impairment of contracts would only weaken the future position of the borrower in the loan market. He was unable to see that enlarged governmental expenditure, even on capital projects artfully excluded from the ordinary budget statement, could increase aggregate purchasing power. He failed to realize that an extra dollar taken away from Jones by taxation, or borrowed from Smith through the sale of government securities, did not create a net addition to the community's purchasing power when paid to Robinson for doing something which neither Jones or Smith wanted enough to pay a dollar for. And finally when it came to debasing the currency and creating the illusion of high prices, the old dotard was simply aghast. This version of the Preface to Morals seemed to him the Prelude to Infamy. He was left gibbering about the recent German debacle when upon the abandonment of the inflationist experiment the newly introduced Reichsmark of gold was declared by decree to be exchangeable for a million million pre-war marks.

With the collapse of prices in the fall of 1929, the feeble precepts of the old doctrines were openly flouted by the practical gentlemen then in control of affairs. The inevitable downward readjustment of prices of commodities and labor it was sought to stem by swearing the big industrialists to maintain the old wage levels. This Parkingtonian mop for a time obstructed the necessary process of price subsidence; and where adhered to, quickened the discharge of all but essential employees, thus rapidly enlarging the area of unemployment. It was supplemented by a rising tariff which choked more effectively the conduits of foreign trade, and was aggravated by the failure to make any effective reduction of public expenditures and by the prodigal outlay upon wheat and cotton surpluses in a disastrous attempt to peg the prices of these staples. No more pitiful record of taurocephalic incompetency ever disgraced our economic annals. But while the older economics was practically impotent under the last Administration, its complete effacement occurred only with accession of the present régime. It is true that the new Administration retrieved some of the gross mistakes of its predecessor. Its drastic imposition of the banking holiday was probably warranted by the extent to which invisible rot had corroded the country's banking structure. The new leadership made more than a gallant gesture in cutting down ordinary public outlay, though it subsequently undid its virtue by the bifurcation of the budget, permitting it to enjoy the pleasures of sin for a season by earmarking its intended pro-

fusion under the name of "capital expenditure."

However our new masters would have none of the old economic philosophy. They also are practical men. They have no use for the old adage—"when in a fog, stand still—you are as likely to move in the wrong direction as towards home." Their theory of medicine is the application of strong specifics. Like the eminent medical practitioner of old, they have one sure remedy. If the patient cannot otherwise be cured, they give him fits, because they know they can always cure fits. In place of the time-worn—and time-dishonored—dogma of the slow, natural, automatic readjustment of competitive prices with the resultant adjustment of supply to demand, they are exponents of a planned economy, an ordered industrial society. While they deny communion to the Technocrat, they are profoundly impressed with the ravages of "technological unemployment," and through rejecting the Technocrats money unit, the "erg," whose value is ever constant, they are experimenting with their own dollar whose value, day by day, is never the same.[2]

For the new school has quickly grasped the idea that, short of avowed revolutionary doctrine, there is no device like manipulation of the monetary unit which will align them with the mass of social innovators. A "managed dollar" is only a weakened form of the Catilinarian *tabulae rasae*. Mr. Keynes, the master mind of the new school, has told us that "if the orthodox school had been more reasonable and less obstinate, the transition to the new methods might have been effected in a quieter tone and with more urbane observances," but that in the United States at least the old régime "should, indeed, be thankful that they had not been strung up on lamp posts, and that it has proved feasible to convince the public that a change has really and truly occurred by the milder method of strong language." A revolution is probably no time in which to look too closely for either consistency of policy or a sense of humor. But the Old Economist cannot wholly repress a smile when the government enacts a searching statute regulating the future offerings of investment securities in order to make certain that the buyer gets exactly what he thought he was buying, and this directly after repudiating its own signature to the largest mass of securities extant, to wit, those of the United States, payable specifically in gold of a definite weight and fineness! Hardly on a par with this gargantuan inconsistency is the public policy of urging with scorpions, the private employer promptly to re-engage workers at higher minimum rates of pay, while slashing its own payrolls and discharging hundreds of its own employees, presumably to enhance their "purchasing power."

So far as the advocates of a planned economy deign to assign reasons for the discarding of the older economic philosophy they point out that the idea of automatic price adjustments hinged upon the assumed competitive mobility of prices; that with the fixed price policies of the industrial trusts and the rigid wage scales enforced by strong labor associations the old price mobility has largely disappeared; that in consequence we must supplement the enfeebled workings of the old régime by a masterful trade policy which shall brook no denial of the imperious will of

[2] Since the statement above was written there has been promulgated a devaluation of the dollar to a 59 cent level, which is effective until or unless a new devaluation of the dollar shall be proclaimed.

the government directorate and which will recognize business associations only as they comply in submitting industrial codes which appeal to our new industrial magistracy.

It is true that modern industrial organizations both of capital and labor impede swift competitive price readjustments. In the long slump since 1929 the recession in the price of steel rails has been relatively slight, and wage scales of highly organized labor have dropped far less than prices generally. The penalty for such recalcitrancy was registered in the terrible shrinkage in steel output, and in the deflated payrolls of the most powerful unions. Will the herculean task of attempting to regulate these domains through industrial codes approved by the government meet better success? Will these extra-legal licenses to operate be kept clear of self-interested manipulation by the "sectional institutions" which work them? In Adam Smith's day, as he records, it did not require much argument to silence those who professed to trade for the public good.

As a final reason for the supplanting of the Old Economist some mention should be made of his traditional attitudes in the matter of foreign trade relations, and in the cognate sphere of internal government. The international division of labor seemed to him so prolific of reciprocal advantage that the part of the good neighbor was to maximize its area. If a benighted region refused to participate in the communal advantages of free interchange, the open door was still imagined to be the avenue of the least loss to the free trading nation. Jockeying for advantage was adjudged the petty cunning of the horse trader. This, in the eyes of the New Nationalism, is patent error. Let each nation sit on its little heap or its big heap and try to short-change his fellow in driving a sharp bargain. This is the new doctrine of international trade. If it results in foregoing the largess that an unrestricted commerce might proffer, let each be content with the consolation of national self-sufficiency. Let us forswear the silks of the Orient or the supple textiles of the power loom and rejoice in home-spun self-sufficiency. The Dark Ages have no terror for the self-sufficient.

As to the Old Economist's views upon organic constitutional law, there is perhaps little need of destructive criticism. Legal institutions and economics lie after all in quite distinct provinces, and the older economist's predilection for a particular legal structure naturally was but dictum and carried no coercive authority. He had, however, assumed the permanency of the institution of private property as well as the sanctity of contract, and was wont to assure us that these were basic to the industrial order. Where our own constitution provided that private property shall not be taken for public use without just compensation, he had construed the declaration literally, whereas it now appears that the phrase is to be construed merely as a Silurian epigram. When he held a gold certificate carrying on its face the statement that the Treasury acknowledged itself the mere custodian of the equivalent coin which *he* owned, he had supposed it was the same as a warehouse receipt or a hat check. Naturally, he was jolted out of this complacent confidence by being called upon to stand and deliver under threats of severe criminal penalties. *Inter arma silent leges*—"what is a little matter like the Constitution between friends?"

And so the old warrior disappears over the horizon, and wings only an occasional Parthian shaft to disturb the

"The shout of them that triumph,
The song of them that feast."

He, at least, can boast that he is not chargeable with hypocritic indignation towards defaulting foreign creditors, nor with acquiescing in a disruption of organic constitutional law, nor with a refusal to stabilize foreign exchanges, nor with an insistence that other nations follow our policy of profusion on public works to raise the world level of prices, nor with confiscating the savings of the thrifty, nor with violating the public faith.

COSTS AND THE GOVERNMENTAL CONTROL OF BUSINESS

By THOMAS H. SANDERS

Tendency to Increased Governmental Control

A GREATER interference in and control of industry by governments and governmental agencies is one of the outstanding tendencies of our times; it is declared to be in the interests of the people at large, and against private interests of a predatory or antisocial character. The policy is not a new one in the world; in the Middle Ages the commerce and industry of practically every country, and indeed of every district, were controlled and regulated to a degree which it is difficult for us now to picture. With the coming of the great mechanical and scientific inventions and the growth of the capitalist system, it was felt that these old restrictions operated to prevent mankind from coming into the full enjoyment of its new heritage, and in European countries the nineteenth century was largely engaged in sweeping them away. In this country they never took root.

But after 150 years of the industrial age it is now found that it will not, in its own spontaneous operation, minister fairly and uniformly to the well-being of the people. In particular it is seen that competition, far from leading always to the production of more goods for the enjoyment of the people, is often a disastrous and destructive force, and the cry again goes up for governments to intervene with measures designed to eradicate the evil tendencies, and to assure to the people at large a more equal enjoyment of the good things of life.

We need not look to the Russian experiment to illustrate the point. That experiment is the outcome of intolerable political conditions rather than of economic conditions, and our own experiments are not likely to take that form. But our experiments are already far-reaching enough, and it is certain that governmental regulation is going to be greater in extent and different in character from what it has been in the recent past. The sufferings of large numbers of our people have been sufficiently great, and their sense of their own political power is sufficiently keen, that it is impossible to suppose that they will not make constant attempts to improve their conditions. On the other hand, nobody who has a sense of history or of social organization will advocate a return to anything approaching the conditions of the Middle Ages. To bind ourselves again with the fetters from which we have so recently shaken ourselves free would indeed go far to prevent us from enjoying a standard of living made possible by advances in the physical sciences and by mechanical invention. To destroy this organization, and with it the results of a century and a half of experience, would probably be even more disastrous than a prohibition placed upon scientific invention itself, for it is through this industrial organization that the results of scientific invention are made available to the people.

In this dilemma, between the certainty, on the one hand, that more control or regulation will be applied, and the certainty, on the other hand, that

too much or unwise control will be destructive rather than constructive, the real problem is to discover what forms of regulation and control will be most salutary and least inimical to the desired progress of our economic life.

Accounts and Statistics, the Basis of Control—Experience with Public Utilities

A good deal of experience along this line has already been gathered in connection with the federal and state efforts to regulate common carriers and public utilities. This has been going on actively for some forty years, though the beginnings date back much further than that. It was the universal experience that very little, if anything, could be accomplished in the way of effective regulation and control without the aid of reliable records and reports. In nearly every jurisdiction, therefore, under the Interstate Commerce Commission for federal control, and under the several state commissions for state control, a uniform accounting and reporting system has been worked out, by which the utilities have been required to keep their records and make their reports to the regulatory authority. A considerable body of precedent and standard practice has grown up in connection with these uniform accounting systems in the space of ten or twenty years, but even so a great deal is lacking to absolute uniformity of practice. While using standardized forms, and supposedly following the same accepted principles, differences of company policy and conditions of operation frequently lead to differences of accounting treatment. But the main thing to observe is that, in the absence of any uniform systems of account keeping and reporting, the commissions were practically helpless in their attempts at regulation. It is a fair assumption that efforts to extend governmental supervision over all manufacturing and merchandising companies will be similarly handicapped until they have established similar accounting controls; and of course the task will be much greater on account of the very much larger number of business units to be dealt with, and the immense differences of conditions between industries. At present the efforts to set up industrial codes under the National Recovery Administration are occupying the attention of business men throughout the country; the examples cited will, therefore, be drawn chiefly from NRA experiences. But it must be recognized that the problem is more far-reaching than that. Whether the NRA is to be a permanent feature of our industrial life or not, and whatever be the name or form of the governmental organization which attempts to exercise supervision over business, it will have to grapple with this question of the form and content of the accounting data through which it receives its information, so that the problems here discussed are likely to be permanent problems in some form.

Accounting Provisions in NRA Codes—Electrical Manufacturers

The specific efforts to regulate business under the NRA are being embodied in the codes of fair competition, many of which contain provisions relating to accounting and costs. In fact there has been so much talk about accounting under the NRA that many people think that there is a special brand or system of accounting called NRA accounting, which will supplant whatever accounting business has so far been using. This is not the case. There is no special NRA system of

accounting, and there is not likely to be. What NRA needs is a more universal acceptance of the rules and principles of sound accounting as they are already understood among good practitioners. It is true that there is no universal agreement as to principle and practice even among good practitioners, but a considerable beginning has been made toward a general consensus of opinion; this affords a much better start than could be had by beginning with an effort to gain everybody's acceptance of a brand new system.

The typical provisions of an accounting program contemplate four stages, namely: (1) that all members shall keep their records in substantial accord with a uniform system worked out by the industry; (2) that reports shall be rendered, in uniform form, to the trade authority; (3) that having thus ascertained cost, there shall be no selling below cost; and (4) various provisions designed to prevent evasion of the preceding provision. The code of the National Electrical Manufacturers Association contains excellent examples of all these clauses. Of this program, the first point, providing for uniform accounting, has already sufficiently proved its worth to be accepted as a principle, recognizing that individual companies will wish to make detailed modifications for their own purposes. The rest of the program is all part of the new experiment, and it remains to be seen how far we can wisely go with it. There is talk, for example, not only of making reports to the trade authority, but of furnishing the same or other reports to a department of the Federal Government. While it has been assumed that such reports as are necessary will be gathered, yet it is desirable to proceed cautiously in this matter and not rush to the accumulation of vast quantities of statistical material which will impede rather than help the administration of code matters.

Adoption of Uniform Accounting and Cost Principles

It has already been stated that it would be better not to attempt to create a new accounting system for this purpose, but rather to begin by adopting those principles and practices which already have found the most general acceptance. In the matter of balance sheets and income statements there has been a good deal of collaboration, for example, between the American Institute of Accountants and the Committee on Stock List of the New York Stock Exchange. Admitting that nobody's recommendations have yet found universal acceptance, there are authoritative and generally accepted practices in this country, approved by the American Institute and other bodies. If modifications are needed, they can doubtless be arranged in conferences between the various interested bodies, but certainly a long step forward will be taken if their findings can be adopted as a beginning.

With regard to costs the National Association of Cost Accountants has been engaged in the formulation of a statement of general principles.[1] Here the difficulties are likely to be even greater than those arising in the financial statements, especially when it is remembered that not only factory costs must be included but also selling and administrative costs. The problem of arriving at the direct costs of a product will occasion little controversy; there may in individual cases be special conditions incidental to the costs of direct materials and direct labor, but

[1] See XV *N.A.C.A. Bulletin* 8, December 15, 1933.

they can probably be settled fairly readily. The problem of overhead will cause much more trouble, both as to what shall constitute the overhead, and how it shall be distributed. The listing of the items will especially bring up the question of interest on the invested capital and the basis for the computation of depreciation. In the matter of the distribution of overhead the basis of allocation of specific items of expense to departments and products can perhaps be agreed upon without too much difficulty, but the next problem is that of deciding upon the volume of production, or the percentage of plant capacity utilized, upon which the overhead shall be spread. This is likely to give rise to wide divergencies of opinion. The great differences which can be produced in final cost figures by computing them on a 40% activity as against a 75% activity are well known. There will also be the question whether this volume shall be decided solely by conditions within the particular company, or whether the conditions of the industry as a whole shall be taken as the basis.

Accounting Problem Subdivided

It would be well to define clearly the subdivisions of the problem. The various stages of accounting work and materials which are likely to be affected by, or contribute to, public regulation are as follows:

1. The internal records of the business; the actual records of its transactions, including cost records.
2. The reports to be rendered to the regulatory authority.
3. Accounting and cost schedules which may be submitted as evidence in hearings of complaints as to selling below cost, or other infractions of the code.

Internal Records of the Business.—As has been stated, a substantial body of accounting and cost principles has already been evolved and has received considerable support. In so far as these principles are common to all industries, they probably could be contained in a very few pages, but in specific industries their application often may give rise to grave difficulties. The members of each industry will have to determine what the general principles mean as applied to their conditions, but constant efforts should be made to secure uniformity as between different industries, so far as that may be practicable.

The accountants of the country, and their several representative associations, constitute the most influential nucleus of opinion and practice on the subject. Perhaps the greatest single guiding principle in this existing body of accounting lore is the idea that the main business of the accountant is to record and report exactly what happened, as truly and clearly as he can. There has been some attempt to belittle the function of the accountant as a historian, but the function is of the greatest importance, and no good will come from ignoring it. Only confusion and misunderstanding can arise from the failure of the accountant to report the facts accurately and completely. In any regulations, therefore, which undertake to prescribe what the accounts shall show, it is to be hoped that nothing will be adopted which may tend to obscure the record of the actual course of events.

The question of interest on investment is an important item and may be considered from two aspects, first, a an element in business management and, second, as a factor in records. On the first of these grounds, it is generally agreed that a business normally should in its selling price recover enough to

cover its costs and give a return on its investment. It is also agreed that, by incorporating this item in the costs, recognition is given to the different amounts of investment devoted to the production of the several products. And further, when it comes to gathering figures for a number of companies on a comparable basis, certain inequalities are removed by the inclusion of the charge for interest on investment. It adds to the value of the composite figures if they can be seen with and without this element of cost.

On the second matter, that of records, certain infractions of the general principles of accounting may arise if this charge for interest on investment is incorporated in the regular financial accounts. A profit may thereby be anticipated prior to actual sale of the goods, and inventory values may be correspondingly inflated. For these reasons there has been widespread opposition among accountants to the inclusion of this item in the regular financial books.

Must we then forego the business advantages because of the accounting difficulties? Not necessarily; methods can be devised within the books themselves by which the undesirable effects may be eliminated. Furthermore, it is possible to prepare cost figures, including interest, without including them in the general financial books, though accountants for the most part prefer a tied-in system.

But the present discussion relates mainly to cost accounting as affected by the codes. The general problem of maintaining prices on a healthy basis will be helped by the inclusion of interest, and in considering a complaint against a company accused of selling below costs, this factor should be considered as part of the evidence. But it does not seem necessary to make a hard and fast rule that every company shall keep its regular records on a basis including interest.

The second very troublesome problem is depreciation. The great questions here are whether the periodic depreciation charge shall be computed upon the cost or replacement value, and by the straight-line method or some other. The great majority of businesses, for financial accounting purposes, are doubtless figuring depreciation on original cost, and by the straight-line method. But where the circumstances of ownership of the business, or changes in price levels, have resulted in book-cost values which are quite out of line with present replacement values, for cost purposes it is often desirable to use the latter for computing the depreciation charge. In considering a charge against a company of selling below cost, undoubtedly the depreciation should be reckoned on a replacement-cost basis.

There has been some tendency, in speaking of cost under the codes, to think of it as consisting only of material cost plus direct labor charges. Such a concept cannot possibly suffice in this age of machine production and nation-wide distribution. Not only must a heavy charge be made for manufacturing overhead; usually there are further heavy charges for selling and administrative overhead to be met, before a profit accrues to the business. The National Association of Cost Accountants hit the nail on the head when they specified that in no case shall "cost" include less than the total delivered cost. If any attempt at all is to be made at insisting on prices which cover cost, there is no sense in stultifying the movement at the outset or in evading the difficulties of the problem by

weakening the definition of cost down to a point which could keep no modern business afloat.

Reports to the Regulating Authority.—What has been said regarding the accounting systems to be kept by the individual business would naturally condition to a great extent the nature of the reports it may be called upon to furnish to a trade association or a governmental office. It is submitted that the most useful and reliable figures can be gathered from reports prepared on the basis indicated. If certain statistical figures are thought desirable, in addition to the reports drawn directly from the books of account, there can be no objection to that, but they should not be combined with the accounting reports in such a way as to obscure their primary purport.

The other main consideration on reports to be rendered is the sheer bulk of them. The volume and complexity of reports now required from public utilities become a grave burden upon them; rather than add similar burdens to all industry it should be the steadfast purpose to simplify the reports down to the point where they may be audited and digested by a competent government employee for a useful purpose. A determined effort ought to be made (a) to simplify the form and content of all required reports, and (b) to coordinate those required by different governmental departments to see how far they could be made identical, or at least more alike.

Accounting Exhibits as Evidence.—When it comes to hearing a complaint of breach of the code provisions, accounting statements prepared directly from the records would doubtless be submitted as evidence. But, as in public utility hearings in rate cases, much other evidence would also be required, and it is not desirable to change or extend the accounting records proper in a vain attempt to make them include everything that might be asked for by way of evidence in such cases. In a complaint about selling below cost, for example, it would certainly be material evidence to say not only what the costs actually are, as figured by the party complained of, but what they would be if figured with interest on investment and with depreciation computed on replacement values. It is doubtful, however, if any single set of figures would prove or disprove the complaint, which would have to be dealt with on broad and general lines. It would be futile to try to attack minute infractions of this rule; only major offenses could be taken cognizance of, and such as would be reasonably easy to demonstrate. The cost figures of the offender himself would be examined to see if they had been prepared in accordance with the principles adopted by the association; if not, then new calculations would be made in harmony with those principles.

Securing Comparable Costs

Presumably the primary intent of the regulation against selling below cost is that a company shall not fix selling prices lower than its own cost of production. On this basis the question could be judged from the company's own figures, by comparing its costs with its selling prices. But in practice most of the complaints are likely to be brought by competitor companies who compare the offender's selling prices with *their* costs, and as a next step compare his costs with their own costs. Still more will it become necessary to compare costs of different producers, when it comes to determining how far companies shall be permitted to sell below

their own costs to meet competition. In other words, it is inevitable that costs of different producers will be compared, in the efforts to enforce this provision.

Emphasis has been laid elsewhere on the necessity, in these circumstances, of having the cost figures prepared on the same basis and by the same methods and principles. There is one other important respect in which they should be comparable, namely, that the products made by the different companies shall themselves be identical. In some cases this will be easy to establish, but in many instances differences in the products will make it difficult to compare their costs. One of the defenses of a company complained of will be that its product is of a different quality or construction from that with which it is compared, and that these differences in the product justify the differences in cost—a line of argument which it will be difficult to combat. The general increase in standardization of products and prices will aid in this matter and should be further encouraged. It should not be impossible to establish comparable costs for comparable products, but this is one phase to which a good deal of attention will have to be given.

Costs and Selling Prices

The question has been raised whether, in its discouragement of selling below costs, the National Recovery Administration is going contrary to previous government policies, and is approving or authorizing collective price fixing. Some color is given to this idea from the fact that the codes of some industries have included provision for minimum prices, but a careful study of these codes does not support the conclusion that price fixing, as commonly understood, is being favored by the Government. The code for the lumber and timber products industry, approved on August 19, 1933, is an example in point. Article IX states that " . . . the Authority is authorized to establish and from time to time revise minimum prices . . . " It should first be observed, however, that this clause occurs under the paragraph heading, "Cost Protection," and in the supporting evidence it is shown that the peculiar conditions of the lumber industry, especially the problem of joint costs arising from cutting one and the same log into several different grades of lumber, and the inability of many small mills to figure costs correctly, led to the adoption of this clause as the only means of safeguarding the situation. It is further to be noted that the allowed elements of cost are set forth in the same article in some detail, and it is specifically provided that "the weighted average minimum price of all items and classifications for each species shall not be more than cost of production . . . " In other words, no selling price including a profit is being authorized here, but only the use of the cost of production, ascertained according to the standards of the industry, as a minimum selling price. If the effort is continued to prevent selling below cost, it is altogether likely that this device of naming the minimum price, or a reasonable cost, for a specified product will be resorted to as a simple method of defining an otherwise almost indefinable situation. At the time of writing, reports from Washington seem to suggest that this solution is being considered.

Actual Differences in Cost

After all variables arising from methods of figuring the costs have been

eliminated, and cost figures computed on the proper and accepted methods have been secured, the authorities hearing the case will be confronted with actual differences of cost as between the respondent and the average of the industry; or at least there will be differences between the respondent and those who brought the complaint. There is no doubt that such actual differences do exist, although it is true that they would be less than what now appears if everybody figured their costs on a comparable basis. The hope that this comparable basis would eliminate all differences is, however, a vain one.

The administrative authority will then be confronted with the problem of determining a policy to be followed with respect to each of these several differences; in particular they will have to decide which of these differences justify a difference in the selling prices and which do not. On this matter the regulating authorities will encounter their most difficult problems of policy, as will be seen from a consideration of the following list of causes which may quite commonly occasion differences in cost between different producers:

1. Different degree of utilization of plant capacity.
2. Different degrees of efficiency in organization and management.
3. Acquisition of properties and plant at low prices.
4. Advantages or disadvantages arising from geographic location with regard to raw materials, labor markets, freight charges or selling markets.
5. Specialization by a company on one product, where-as other producers manufacture it in conjunction with other products.
6. Payment of lower wages than others in the same industry.

Other causes of different costs may arise, but most cases will fall within one or the other of the above categories; a consideration of them will indicate the nature of the problems thus encountered.

Different Utilization of Plant Capacity.—Suppose that some plants can average an operation of 75% of their plant capacity all through the year, while other plants can only average 50%. Or suppose some plants run three shifts, twenty-four hours a day, while others run only one shift with an operation of eight hours per day. Other provisions of the code are designed to equalize, or at least to limit, working hours per man; in some cases the code prohibits excessive working hours for the plant, such as running three shifts per day. It is unlikely that the operation of the code can eliminate all differences of this sort, even though in some cases they fix a maximum; therefore, it will become necessary to decide how to treat the differences in cost which will be caused by this condition.

On this question it would seem that there is no alternative except for the industry as a whole to adopt a normal or standard rate of operation upon which costs shall be figured for this purpose of judging a complaint. Having adopted such a rate, the scale of operating expenses used would have to conform with it. That is, if the industry as a whole decides that 60% of plant capacity is a proper rate on which to figure costs, and an individual plant is running at 75%, then its actual expenses would have to be corrected to a 60% operation in order to be comparable, and before any complaint against them could be proved or disproved. A code may, and in some cases does, prohibit more than one shift, or two shifts, a day; some industries have placed restrictions on specific

types of machinery, but no code can guarantee that a given plant shall work more than one shift per day, or even that much. The prohibition would be against permitting individual plants to figure their costs on the basis of an extremely high degree of plant capacity utilized, thus giving themselves such low costs that selling prices based upon them would demoralize the industry. This being exactly what the codes are designed to avoid, the authorities could accomplish their purpose only by figuring from the general average conditions of the industry.

Here again, this does not necessarily imply that each company will in its own cost records for internal purposes figure on an average for the entire industry; rather they would be likely to figure on an average of their own experience. But if that company's conduct became the subject of complaint, and a public hearing were held, it would seem that a conviction of the charge of selling below cost could only be sustained with reference to costs which were computed on an average degree of capacity utilized throughout the industry.

Efficiency in Organization and Management.—It is not possible in practice to make a sharp separation between this situation and the last; a high degree of plant capacity utilized is likely to be the result of efficiency and alertness in management. But in this paragraph it is intended to deal with a different group of factors, namely, the actual expenses incurred for doing specific classes of work. If a company management possesses a superior skill in organization and in manufacturing technique, these will show themselves in lower unit costs on specific operations, resulting from better machinery, better methods, better planning and routing, or any other phase of management. Clearly it can never be a part of public policy to discourage this kind of ability; conceivably in some cases it might be slowed up as part of an intelligent policy of public regulation which did not wish to have changes take place too fast. But in the long run progress depends upon ability and enterprise of this sort, and any wise society will encourage it. A company which had excelled in this respect would naturally have lower costs than other companies in its field; so long as it continued to sell above its own cost, it could not be convicted of selling below costs just because its selling prices were below the costs of its competitors. The more able management would not wish to fix selling prices at the lowest point that their own costs would permit, as they would thereby be precluded from collecting an adequate reward for their enterprise. Rather they would wish to see what prices were determined by the interaction of the entire supply and the entire demand, the entire supply including their own and that of less competent producers. In this way they would make extra profits, constituting a form of efficiency surplus. It would then become the business of the regulating authority to permit price reductions based upon genuine efficiency in manufacturing, but not to the point of demoralizing the entire market. Since this policy would be in the interests of producers themselves, as well as serving the purposes of regulation, it might be expected to succeed.

Acquisition of Properties at Low Prices.—In nearly every industry there are a number of companies which have acquired their manufacturing plants at very low prices, either in reorganization or by purchase. If the same owners continue to hold the properties

at values reduced through a reorganization, they may be presumed still to have some incentive to recover their former losses by charging depreciation at rates at or near those required by the original values. A new owner who by purchase has acquired properties at very low cost does not have this particular incentive, yet he may be presumed to wish to make all the profits he can and not give away to customers the whole benefit of his advantageous purchase. Nevertheless, it is certain that when competition arises owners of plants will in such circumstances feel that this is an opportunity for them to get ahead of their rivals, and will begin to cut prices below the point where they cover depreciation computed on normal values. It will further be recognized that under the general principles of accounting they are required, in their own financial records, to figure depreciation on the basis of the actual cost to them.

It is to meet situations of this sort that the proposal has been strongly urged that all companies should figure depreciation on the reproduction value of their plant. This proposal has been examined earlier and has been recognized as a reasonable procedure in cost accounting. As to reports made to the central authority, if any, it seems desirable in the circumstances to show depreciation both on the cost and on the reproduction value. It would be informing to know what the actual depreciation charges are, as figured on the original cost; if in connection with this it could be ascertained how many plants are held by original owners at high values and how many by new or reorganized companies at low values, the true picture of conditions in the industry would be much clearer to the regulating authority. If any considerable proportion of the manufacturers in a given industry are in the latter category, with low fixed charges, it is a certain thing that they will tend to set correspondingly low selling prices, and that relatively few people will thereby suffer. But if only one or two members of the industry are in this fortunate position, it would obviously be a mistake to permit them to jeopardize the economic well-being of the entire group by selling at prices which most of the other members could not possibly meet. This is another matter upon which the facts and conditions prevailing within the industry would have to be ascertained, so that a policy could be worked out which would give most of the reputable members a fair return. In other words, it would be found very difficult to maintain the position that selling prices must cover depreciation on reproduction values if in fact a substantial proportion of the properties in that industry were acquired at far lower costs; but if only one or two members were demoralizing the industry by selling at excessively low prices, it would not be a satisfactory answer for them to say that they had practically no fixed charges because they bought their properties at a bargain sale.

Advantages of Geographical Location.—A woodworking plant within the New York metropolitan area will be found at some disadvantage in competition with similar plants situated in the Middle West, on account of the lower labor rates which the latter enjoy. In so far as the New York company may be selling specialties, or catering to individual tastes, they may overcome this handicap; but in so far as they are all selling standard products, the disadvantage of the eastern company will be serious. This sort of thing is not completely removed by the minimum-

wage requirements of the code, if some companies are already paying wages well above those minimum requirements.

This is typical of a whole range of differentials which may arise from geographical location. Instead of labor it may be raw materials which the well located company can purchase to advantage, or it may be power. The regulating authority will again be forced to adopt a policy with regard to these differentials, and once more that policy will necessarily be based upon the broad economics of the industry. The aim should be to see to it that the representative companies of the industry, those whose production is necessary to furnish the required amount of that commodity, should be safeguarded and receive a fair price. But the regulating authority would find it impossible to guarantee net profits to those companies which were very poorly located; if they wanted to stay in the running, they would either have to accept a smaller return as net profits, or find some compensating advantages which enabled them to offset their disadvantage.

Specialization on One Product.—In a great many industries there are companies which manufacture a number of lines or varieties, their policy being to appeal to large groups of customers by offering them a considerable range of choice. Whatever the reason for producing a mixed line, the attentions of the staff are divided, machinery and equipment are apt to be varied and miscellaneous, and the possibilities of long continuous runs are curtailed.

Yet within the same industries there are usually companies which have specialized on one product or group of products, making it possible for them to concentrate all their manufacturing and selling efforts on one objective. If the costs of such a specialty company are compared with the costs of a similar product made by a variety company, where the product is but one of many, it is probable that the specialized company will show substantially lower costs.

Assuming that comparable cost figures have been secured, what attitude is to be taken toward these differences? What will a sound public policy require of these companies? It cannot very well forbid specialization; in spite of all its dangers it helps to make many products available to masses of people who otherwise could not afford them. So long as the specialty company has computed its costs along sound and reasonable lines and does not sell below those costs, the fact that its costs are lower than those of other producers with a varied line does not justify intervention by the regulatory authority. It will have to be left to company managements to find out from their own experience whether specialization or varied production is the more advantageous, and those companies which believe in varied production will have to find other advantages to compensate them for any excess in manufacturing costs they may thereby incur. This is a matter in which, it would appear, industry will have to be left to develop its own policies and find its own level.

Profits and Selling Prices—Price Cutting

In the process of considering a charge of selling below costs, much weight will be attached to the company's income statements. If these have been prepared in accordance with standard accounting practice and have consistently shown net profits earned, then the presumption is in favor of the company and against those who com-

plain that its selling prices have been below cost. In the face of net profits earned, the charge of selling below costs could not in any event be sustained with respect to a company's products as a whole, but would have to be limited to some one or several products; to prove the charge with respect to them, it would be necessary to show either that the selling price on them was lower than the costs as computed by the company itself, or else that these costs were wrongly computed. To support the last-named charge the complainants would have to demonstrate that there had been a wrong allocation of costs among products, resulting in the products complained of being favored with unduly low charges. Probably this would resolve itself into a discussion about burden allocation.

Under these conditions there may be many occasions when a company will be selling above its own costs, but below the costs of other producers of the same lines. These high-cost producers will then find it necessary, in order to maintain their position, to meet the prices of the low-cost producer, and in so doing to sell below their own costs. This is exactly what takes place now, and it is difficult to see how any regulating authority can prevent it; in fact many codes allow it, thus adding to the difficulties of regulation. The problem will then be upon the high-cost producers to improve their practice, and to bring themselves into line with their more able competitors. Unless the public authority is prepared to go much further than now seems contemplated, and to assume the responsibility of guaranteeing to make up losses of unsuccessful companies, or to undertake their direct management to the extent of fixing prices for them, the only thing remaining is for the higher-cost producers to bring down their costs, or remain profitless until by competition they are eliminated from the field.

The final step will be reached when it has been demonstrated to the satisfaction of the authorities that a company has actually been selling below its own costs, and that this price cutting was not made necessary by market conditions in which more favored producers were operating at lower costs. The offender, in other words, has been selling below his own or any other producer's cost. Even here there are likely to be two distinct stages: (1) where the selling prices cover all operating expenses except depreciation, (2) where the selling prices not only fail to cover all costs including depreciation, but are less than the total operating expenses without depreciation. In the stress of competition there is a disposition among manufacturers to feel that they are free, for a time at any rate, to sell at prices which do not cover depreciation, provided they cover actually disbursed costs. It does not seem that the regulating authorities can properly countenance this idea. It is good and sound business, as well as good accounting, to include a normal depreciation charge in operating costs; no program looking to recovery in fundamentals can ignore it.

It should, therefore, make no difference whether the price cutting consists merely of ignoring depreciation, or whether it goes further and eats into the cash disbursement costs; if price cutting is clearly established in breach of the terms of the code, the authorities will have to take some action. It is reported that a large number of complaints are already on file in Washington, waiting to be investigated by some authority which is legally and profes-

sionally competent, and the dénouement will be interesting. The law provides that one step may be the securing of a cease and desist order from the Federal Trade Commission, forbidding the further use of the low prices complained of; if this fails, then recourse may be had to the criminal procedure sections of the code, in which heavy fines are provided. Beyond that, the licensing provisions might conceivably be called into use, under which, by withholding a license to operate, the authorities might entirely prohibit a company from doing business. But the criterion of price cutting will have to be found in the general conditions of the industry, and not in any cost formula of a mathematical character.

SCIENCE, LOGIC AND HUMAN INTERCOURSE[1]

By L. J. HENDERSON

I SHALL try to talk about what happens when two or three people carry on a conversation. I assume that conversations such as conferences, committee meetings, board meetings, attempts to buy and sell, are a large part of business. I am going to talk about many things and shall have to talk rapidly. I cannot treat these things systematically because of my inadequate acquaintance with some aspects of the question and because present knowledge is not sufficient. My statements will be fragmentary and therefore, I fear, unsatisfactory.

I

When people talk together, it is easy to observe that they are ordinarily not concerned with a logical analysis of fact. Sometimes one observes the contrary, but this is exceptional. In order to talk logically the question must be sharply limited to a particular problem, and even then success depends upon the ability and intelligence of the persons concerned. Unless people are unusually intelligent and skillful, they cannot discuss even a simple question logically for more than a very short time. This has been recognized in all ages. Long ago Voltaire remarked that nothing is more common than to converse to no purpose.

There are a great many reasons why it is impossible so to pursue a general topic. Let me begin by calling your attention to two. In the first place, in order to talk about a topic it is necessary to have an adequate conceptual scheme, a way of relating some things to others, a working hypothesis, a frame in which your thought is set and in which you may operate on the facts. For instance, if we see an eclipse, we have no difficulty in thinking about it because we have a conceptual scheme of the moon passing in front of the sun. Not so a savage. But if you are talking about the policy of buying or selling gold, I suggest that your conceptual scheme is far less clear. I suggest that no one of you has a clear conceptual scheme for putting together mentally the complicated events that are involved.

In the second place, if you are to proceed clearly in your thought, you need not only a good conceptual scheme but also an adequate method.

It is extremely useful to bear in mind these two considerations, first, that you must have a working hypothesis and, secondly, that you must have a method. In the natural sciences, beginning with mathematics, going through biology but hardly beyond, you find both. You don't find them in business, in law, in certain aspects of the practice of medicine or, above all, in theology, but you do find both a working hypothesis and a method in the highly developed sciences.

If then we are to try to discover what happens in conversation, it will perhaps be useful to begin by considering what happens in scientific research. In the sciences one begins with facts, and I suggest that it is necessary for me to say what I mean by the word "fact." Judging by the experience of the

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natural sciences, facts are most conveniently defined as clear statements about things seen, heard, touched, tasted, smelled; that is to say, they are statements about data, data being observations of the kind made by people who are observing external objects or phenomena. I am concerned to convince you that it is extremely useful for all people who wish to think clearly to recognize that facts thus defined had better be kept as a separate class of things. If not, sooner or later there will be trouble. It is because science does so, or in so far as it does so, that science does not encounter trouble of certain kinds.

For this there are various reasons. First, you can see objects clearly and distinctly. For instance, you can see a person and fairly accurately describe the color of his hair, but you cannot observe your own toothache with the same precision and nobody else can observe it at all. If you go on from considering pain, or other sensations that are most like external sensations, to such things as fear or other passions and emotions, the observations become still less sharp.

Science proceeds from facts to the uniformities in facts. These are themselves facts.

Secondly, there is in respect of facts thus defined, as compared with other experiences, a further extremely important difference. For facts and for them alone there is an independent judge of whether they are or are not correct. This judge, which is nothing more than some process of verification, is upon the whole generally accepted. If you say that such and such an action is unjust and I say that it is just, there is no operation to perform to tell us whether I am right or you are right. If you say that this room is more than 30 feet long and I say it isn't, we have only to get a yardstick and make a measurement, a test independent of our sentiments. In the first instance, there is no external judge of justice; in the second, there is an external judge of the length of the room.

Remember then that nobody can be "objectively" right about the sentiments. It is only possible to be "subjectively" right, *i.e.*, right for people who feel as you do.

Now in addition to fact, science makes use of what I have referred to as conceptual schemes, theories, ways of thinking. It is a common observation that science is constantly giving up old opinions. That depends chiefly upon changes in conceptual schemes that result from the discovery of new facts, rarely upon a rejection of old facts. For instance there was a time when people thought of the sun as going around the earth, then they thought of the earth as going around the sun, and now some astronomers think of this question in a way that seems very strange indeed to a layman. It is a peculiarity of conceptual schemes that they are used because they are convenient, not because they are true or false as facts are true or false. They are conventions adopted as a means of thinking. In the next place, there is in science a very marked disposition not to go very far with theories without returning to facts for verification of the deductions. The conceptual scheme exists for convenience and as a means of passing from known facts to other unknown facts. The conceptual scheme supports not only facts but the reasoning about facts.

In order to reason correctly it is necessary to use words precisely. On the whole the natural sciences do so. How can words be precisely defined? Most words that can be precisely

defined depend for that possibility upon having one of two references; either they refer to concrete things (Bunker Hill monument), or they refer to an operation. What do we mean by the word "length"? The word "length" according to Bridgman can have a meaning only in so far as it refers to a sharply defined operation. For instance, the length of this room is the result of an operation of laying down a yardstick a certain number of times from one wall to another. Length thus measured has to be distinguished from length measured by optical means (as in astronomy). This may seem to you a trivial distinction but it should go to show you that men who work in laboratories have found it necessary for practical purposes to make definitions that seem to be hairsplitting. On the other hand, there are many words that can hardly be defined except by arbitrary and therefore unsatisfactory definitions, for instance, hot (weather), fair (competition), large (room). What is the meaning of hot, fair, large under those circumstances? The answer is that until they are defined arbitrarily they have no clear meaning. Fair competition is some phenomenon or phenomena toward which you have a certain vague sentiment, and if you can further analyze it unemotionally, you can do more than I can. I say this is a large room, you say it isn't. The only remark that can be made relevant to the situation is: there is a disaccord of sentiments between you and me. If you go on disagreeing in that way, the result, in the case of a great many people, will be anger. That is a familiar form of a process that occurs in conversation. On the other hand, we may define a large room as containing so many cubic feet, then we can verify by measurement and calculation and agree that the room is large. Arbitrary definition is the only device known for getting around a difficulty of this kind.

A man who has accepted the arbitrary definition in advance, but who has a sentiment that it is a small room, may then say it is a nasty little room. In other words it is well known that you must use for normal human intercourse words that are vague as well as those that are precise. Concerning these vague words that express sentiments you must not argue if you wish to avoid trouble and to achieve a purpose through the actions of a man with whom you are talking.

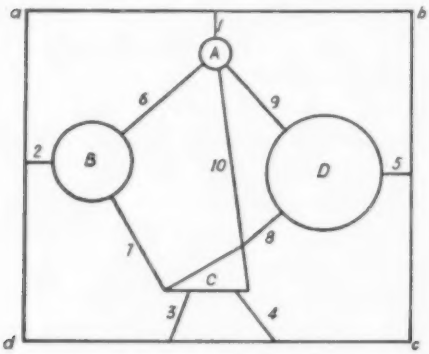
It is impossible to get along without the vague words. One of the functions of slang is to provide words that have almost no meaning so that they may express sentiments easily.

There is an enormous difference between the anatomical description of the human body and a description of the emotion called fear. Gray's *Anatomy* will give you in 1,500 pages a detailed analytical description of the anatomy of the human body, all the result of visual analysis. You may find descriptions of fear in the works of Dostoievsky. But such descriptions are not precise and sharp. Nevertheless, in spite of the difficulty of analyzing fear, the concept fear is necessary to all of us, because it refers to an experience that is no less important because unanalyzable.

II

Next, what are the kinds of errors that occur in reasoning? There are, in my opinion, two principal classes. They are not of the kind commonly discussed in elementary works on logic. Note first that it is a plain fact that you and I often find ourselves in the situation of reasoning out results that prove to be incorrect and unsatisfac-

tory. What are the modes of unsuccessful reasoning? One consists in mistaking for cause and effect a relation



where there are many factors. This is a terrible source of difficulty. In Washington, moves have lately been made to produce particular results. The results are not forthcoming. Why? It is because the factors involved were for the most part unknown to the persons who made the plans.

A student drinks two or three cocktails, starts to shave himself with an old-fashioned razor, drops it on his toe, doesn't bother to take care of the cut, goes out for the evening, the wound becomes infected and he dies. What is the cause of death? For the physician when he signs the death certificate it is general septicemia, but when he talks to the family it may be the failure to take care of the wound properly; for a prohibitionist it is the demon run. What is the cause of our ills at the present time? Capitalism, or some other abstraction of which we have no clear idea whatever. So say many of our contemporaries. When people can represent to themselves as a cause some abstraction and turn it into a personality, preferably a beautiful goddess or an ugly devil, they are greatly gratified. But this is a way not to think clearly. Read the *Nation* or the *New Republic* or any conservative paper (for both conservative and liberal publications are alike in this) and you will find that many articles attribute some complex phenomenon to a simple cause, and that cause is often personified as a devil.

In organic processes, cause-and-effect analysis leads, in general, to erroneous conclusions. The only alternative known to me is mutual-dependence analysis which is, in general, impossible without the use of mathematics.

Consider the figure above. The four rigid bodies A, B, C, and D are fastened to a framework a, b, c, d, by the elastic bands 1, 2, 3, 4, and 5. A, B, C, and D, are joined one to another by the elastic bands 6, 7, 8, 9, and 10. Here the conditions of statical equilibrium can be worked out mathematically, or determined empirically by introducing spring-balances into the bands, 1, 2, . . . 10, and reading the balances.

Now imagine the point of attachment of 5 on the frame to be moving toward b, all other points of attachment remaining unchanged. What will happen? Consider A. There will be action on A by the path 5, 9, by the path 5, 8, 10, and by the path 5, 8, 7, 6. But in each case these actions do not cease at A, just as they do not previously cease at D. The first, for example, continues along the path 10, 8 and so back to 5. If we try to think of all this as cause-and-effect, we must inevitably reach a state of confusion. The analysis of such a problem, difficult at best, is possible only by means of mathematics, and leads to the view that certain variables are mutually dependent in a manner defined by expressions which are functions of these variables. Among these variables is time.

The fallacy illustrated by these considerations is one into which we all fall when we try to explain political,

social and economic phenomena. These phenomena are manifestly far more complicated than anything closely analogous to our diagram, but they are more complicated in the same way that this diagram is complicated, in the same way that the imaginary phenomena represented by the diagram are complicated. We may go a little further and say that social forces and economic forces are more or less like the bands in the figure and that social and economic experiments, *e.g.*, buying gold in Europe, produce unforeseeable results for reasons similar to those discussed in explaining the diagram.

An illustration may serve to make these considerations a little clearer. According to classical economic theory, and assuming the validity of the axioms and definitions employed in this kind of thinking, it has been shown that a protective tariff takes money out of some people's pockets and puts it into the pockets of others, meantime destroying a certain amount of capital. A conclusion drawn by many economists is that protective tariffs are harmful and that free trade is the only sound policy. Let us now consider the last third of the 19th century in Europe. During that period two nations were conspicuously prosperous, England, a free trade country, and Germany, a protectionist country. What is to be said about this fact in view of the theory? Something is manifestly wrong and the explanation may be as follows: before 1870 Germany was a country in which the upper classes were made up of conservative people, officers, civil servants, university professors, professional men, landed proprietors, and the like. In order to build up an industrial civilization rapidly it was necessary to form rapidly a class of entrepreneurs. The protective tariff by taking money out of the pockets of the conservatives and putting it into the pockets of successful speculators was perhaps responsible for the formation of such a class, and the indirect results of the formation of such a class were perhaps to increase the wealth of Germany far more than it was directly decreased by the operation of the protective tariff.

The commonest form of this fallacy is the argument of "other things being equal." Suppose you know that a given phenomenon is accurately described by the equation

$$Y = \frac{X + Z}{X + 1}$$

Let us consider Z the "other things," and inquire regarding the relation between X and Y when "other things are equal," that is to say, when Z is constant. The following table shows 9 different values of Y corresponding to 3 values of Z and 3 values of X taken in pairs.

Value of Y

X =	Z = 0	1	2
1	.50	1.00	1.50
2	.67	1.00	1.33
3	.75	1.00	1.25

It may be seen that if the value of Z = 0, X and Y vary together, *i.e.*, are positively correlated; if the value of Z = 1, Y is independent of X, *i.e.*, there is no correlation; if the value of Z = 2, X and Y vary in opposite directions, that is, are negatively correlated.

Evidently, in this case, reasoning based upon "other things being equal" must be entirely meaningless unless the value at which the other things are equal is specified. For example, the value of Z = 0 might correspond to winter, the value of Z = 1, to spring, the value of Z = 2, to summer. But in

general the facts are much more complex than this. Thus reasoning from statistical correlations is always dangerous and frequently misleading.

This trivial example has been chosen in order to show clearly how reasoning from "other things equal" may go wrong. There are many other ways of getting into difficulties with the same argument, and it should not be supposed that all of them would be easily recognized as analogous to the one chosen for illustration. It should also be understood that reasoning from "other things equal" is frequently the only means of studying a complex situation and that sensible men, *provided they possess intimate empirical knowledge of the other things*, frequently avoid the logical pitfalls and reach useful conclusions.

Another source of error of a very different kind arises from the intrusion of the sentiments either directly or through the vagueness of words. The difficulty in this connection has long been recognized and there is much in Bacon's *Novum Organum*, especially the discussion of Idols, that will help you to understand it. One may perhaps, following Pareto, classify the sources of error of this kind under four headings: the influence of simple assertions, of appeals to authority, of accord of sentiments and of verbal proofs. One of the commonest sources of error is the assumption that to a word there corresponds a thing. Take for instance the word "justice." It is supposed that this corresponds to some kind of existing entity. First, perhaps it is a mere abstraction. Then the abstraction is dignified with a capital letter, then it becomes personified and finally it is elevated to the rank of a goddess and appropriate symbols are attached to this diety. But who shall say what justice is, or beauty or perfection? Men have discussed these questions for centuries and they have never reached agreement. It seems clear that the word justice at least refers to a vague sentiment or rather to a vague complex of sentiments and that, because we attribute objective existence to justice we refer the property "just" to external objects. If someone says that the sentence of Sacco and Vanzetti was just, it seems clear that he has projected his sentiment upon the event called the sentence of Sacco and Vanzetti and somehow associated it with the event.

Consider the word "fatigue." If you work all night in preparation for an examination, you may say the next morning that you are tired; you may make the same remark after climbing a mountain, after standing rigidly at attention for half an hour or after relatively little work when the temperature and humidity are high. But in these different circumstances the word does not refer to even approximately the same feelings. Mental fatigue is clearly very different from physical fatigue, and even in cases of physical fatigue there are many different feelings that give rise to the same statement by the subject. In sprinting, fatigue is associated with lack of oxygen; in long running, with the depletion of available fuel for the muscles; in work, when temperature and humidity are high it seems to depend upon the presence of large amounts of blood near the surface of the body and, very likely as a result of that, upon unfavorable conditions for the work of the heart. Accordingly the word fatigue simply will not do if you are to think clearly and to study effectively the physiological and psychological changes that are involved in the various processes to which I have just referred. Some of

you later in life will have to do with workmen who manifest fatigue. Unless you are on your guard you may well use the word fatigue in a loose way and find yourselves reasoning unsoundly.

If we now go back to our classification of the four kinds of errors that make up this great class, we may proceed a little further with our discussion. First, mere assertion is effective even among educated and intelligent people. The most irresponsible statements, if they are agreeable to us because of our sentiments, are believed. Still more are they believed if we read them in the newspapers. Secondly, men still give weight to authority not only where there is reason to suppose that this is based upon scientific knowledge and accurate observations, but also where there is no such ground. For example, movie actresses and women who are prominent in fashionable society express their judgments about industrial products concerning which they cannot possibly have a sound judgment, and these statements are at least regarded as valuable by advertisers. Formerly it was Homer, Virgil or sometimes any ancient writer, and of course the Bible, that were employed in a similar way to persuade.

Next consider accord of sentiments; for instance, "Beauty is Truth, Truth Beauty." From a logical standpoint this is a meaningless combination of words, but it has pleased millions of English-speaking people, and because it pleased them has seemed to them to have some meaning.

Take another example, this time in the form of a syllogism. All A is X, all X is B, therefore all A is B. Let us take our values of A, X, and B from ancient astronomy.

A = planetary motion
X = perfect motion
B = circular motion

Then we have the conclusion that planetary motion is circular, a theory that dominated the thought of astronomers and of educated men for many, many centuries. But what is perfect motion? Manifestly it is a meaningless expression of sentiment which will not bear close scrutiny. On reflection you see that by putting the argument in this form perfect motion conveniently drops out of the conclusion and the reasoning looks like an analysis of observations, for both planetary motion and circular motion are real things.

Another peculiarity of pseudo-logical thinking is that the conclusions commonly determine the premises. When you try to persuade your father to buy a new automobile, your desire for the new automobile is the important factor in the situation. You give him a reason. He presents valid objections to your reasoning, or objections that you find it expedient to accept, then at once you present another reason leading to the same conclusion, and so on indefinitely.

I conclude that there are two kinds of reasoning and two kinds of action—logical and nonlogical. Logical reasoning does not reason upon assertions, it reasons upon verified facts; it does not appeal to authority, it appeals to the probability that the facts have been carefully, scrupulously and skillfully obtained. It excludes verbal tricks. Logical actions are actions that produce the intended result. For example, as means of reaching port the Greeks rowed their ships and sacrificed to Poseidon. Rowing is a logical action which produced the desired result. Sacrificing to Poseidon is a nonlogical action (so far as we know) which did not produce the desired result, except perhaps in so far as it encouraged the sailors. Most reasoning and most actions are non-

logical, and this fact is not generally recognized. Such is the conclusion that I have been trying to establish.

From all this it follows that if you would modify the actions of men so that they shall do those things that you wish them to do, you must utilize their sentiments. Here is a quotation from Chesterfield[2] which far better than anything that Ican say will make my point clear.

> I acquainted you in a former letter, that I had brought a bill into the House of Lords for correcting and reforming our present calendar, which is the Julian; and for adopting the Gregorian. I will now give you a more particular account of that affair; from which reflections will naturally occur to you, that I hope may be useful, and which I fear you have not made. It was notorious, that the Julian calendar was erroneous, and had overcharged the solar year with eleven days. Pope Gregory the Thirteenth corrected this error; his reformed calendar was immediately received by all the Catholic Powers in Europe, and afterwards adopted by all the Protestant ones, except Russia, Sweden, and England. It was not, in my opinion, very honourable for England to remain in a gross and avowed error, especially in such company; the inconveniency of it was likewise felt by all those who had foreign correspondences, whether political or mercantile. I determined, therefore, to attempt the reformation; I consulted the best lawyers and the most skillful astronomers, and we cooked up a bill for that purpose. But then my difficulty began: I was to bring in this bill, which was necessarily composed of law jargon and astronomical calculations, to both which I am an utter stranger. However, it was absolutely necessary to make the House of Lords think that I knew something of the matter; and also to make them believe that they knew something of it themselves, which they do not. For my own part, I could just as soon have talked Celtic or Sclavonian to them, as astronomy and they would have understood me full as well: so I resolved to do better than speak to the purpose, and to please instead of informing them. I gave them, therefore, only an historical account of calendars, from the Egyptian down to the Gregorian, amusing them now and then with little episodes; but I was particularly attentive to the choice of my words, to the harmony and roundness of my periods, to my elocution, to my action. This succeeded, and ever will succeed; they thought I informed because I pleased them; and many of them said, that I had made the whole very clear to them; when, God knows, I had not even attempted it. Lord Macclesfield, who had the greatest share in forming the bill, and who is one of the greatest mathematicians and astronomers in Europe, spoke afterwards with infinite knowledge, and all the clearness that so intricate a matter would admit of; but as his words, his periods, and his utterance, were not near so good as mine, the preference was most unanimously, though most unjustly, given to me. This will ever be the case; every numerous assembly is *mob*, let the individuals who compose it be what they will. Mere reason and good sense is never to be talked to a mob; their passions, their sentiments, their senses, and their seeming interests, are alone to be applied to. Understanding they have collectively none, but they have ears, and eyes, which must be flattered and seduced; and this can only be done by eloquence, tuneful periods, graceful action, and all the various arts of oratory.

Like all classes, aristocracies are conditioned by their environment, and the members of an aristocracy receive a training that is at least in part dependent upon the position that they occupy and the social function of their class. Probably for this reason there has always been among aristocracies a certain amount of realistic thinking of the kind that Chesterfield called to the attention of his son nearly two centuries ago. Probably there was more such thinking before the sentimental period that came in with Rousseau and the English romanticists. Some of this realistic thinking derives from Machiavelli, whom most of you have been brought up to think of as a very wicked man. Now Machiavelli

[2] *Chesterfield's Letters to His Son.* Thirteenth Edition. London, 1821, Vol. III, pp. 119–121.

was especially interested to *describe* political phenomena and to find out what kind of results will follow certain actions and what kind of actions are necessary in order to produce certain results. In other words he was interested in the mechanism of politics and of the relations between men. I suggest that if you would think clearly you must, as Machiavelli seems to have done, study this mechanism independently of questions of right and wrong, of honesty and hypocrisy, of justice and injustice. Need I add that, so doing, you must not suppose the considerations that you have excluded for the purpose of analysis to be the less important for that reason? This would be a fallacy of the kind that I first described. You cannot lessen the importance of ethics or of anything else by means of analysis. The importance of ethics is a fact. I have chosen Chesterfield's letter because here the subject is such that moral questions hardly suggest themselves to the reader. Thus Chesterfield's point is more easily seen.

III

We have now reached the position that if you would understand the mechanisms of the relations between men you must understand the interactions of their sentiments, and that if you would modify the actions of men you should in general do so by acting through their sentiments. It is the rôle of good breeding, good manners and tact to enable you to do this unconsciously and without analysis. Moreover it seems probable that people who acquire skill in politics and in the management of men often do so without anything approaching a clear and conscious analysis of what their method is. But, as the examples of Chesterfield and Machiavelli show, clear analysis will help anybody to understand the phenomena, that is to say, the psychological and social mechanisms that are involved, and some of you, at least, ought to be able to act more effectively if you are to some extent aware of what you are doing.

As I have said, in order to think about any subject you must have a suitable conceptual scheme. Here what you require is a conceptual scheme that shall enable you to understand what is happening when two or three people are talking together. We have seen that what is happening is very rarely a logical phenomenon. Therefore attention to logic on your part will rarely accomplish much. We have seen that, on the contrary, the conceptual scheme must include the hypothesis that the process is largely an interaction of the sentiments and interests of men. Some executives and some skillful politicians no doubt perceive the usefulness of thinking of things in this way. But upon the whole I am disposed to think or to guess that men who do so are less common in the United States than in the older countries of Europe. We have not here a society that is so highly integrated, or family traditions that are so strong as those in most countries of Western Europe. Thus Americans often learn less about how to bear themselves toward others. This is in itself a disadvantage when they seek to understand the mechanisms of the relations between men. Nevertheless here, as elsewhere, excellent examples of intelligence in understanding the phenomena and of skill in acting upon them may be observed. Thus, during the first month of his administration, President Roosevelt's actions clearly showed such skill and at least strongly suggested such understanding. The contrast is very striking with the

actions of his predecessor, who seems to have been almost unable to carry on skillful operations at the level of the interplay of emotions.

I suggest then that you should fix as firmly as possible in your minds the conclusion that where two or three people are talking together there is going on an interaction of sentiments and emotions, and that usually little else of importance is going on. In particular, it is extremely improbable that logic has much to do with the process.

One or two further remarks: the sentiments are the important thing, not the verbal expression of the sentiments. The sentiments, though incomparably more extensive, include as a special class what the psychoanalysts call complexes. Similarly the verbal expressions of the sentiments include as a subclass the "rationalizations" studied by psychoanalysts. Next, the sentiments of men change slowly and it is in general difficult to modify them for a particular purpose. Thus skill in managing men, skill in conversation and in negotiation depends upon the skillful utilization of the sentiments that exist in people. Accordingly, in so far as men are skillful in these relations it must be either because they possess what we call tact, good manners, good breeding, considerateness and so forth, or, if their conduct is determined consciously rather than unconsciously it must be because they have made a correct diagnosis of some of the sentiments of others and have then skillfully employed those sentiments to the end that they seek. Note that the problem thus studied becomes a technical one, no less so indeed than the problem of designing a bridge. Of course it is and will probably long remain a problem where our technology is vague and at best pretty inadequate.

Some of you will no doubt ask at this point whether I am not advocating hypocrisy and dishonesty, as was suggested above. The answer seems to be that this is a separate question. I see nothing dishonest or hypocritical in Chesterfield's method as he describes it to his son. On the other hand, I have observed many other instances of similar behavior which seem to me either hypocritical or dishonest or both. I suggest that what we regard as bad conduct may arise either in the designing of a bridge or in attempts to utilize the sentiments of people in the manner that I suggest, and I prefer to leave a discussion of ethical problems to others. Perhaps, however, it would be well to cite an instance which, in contrast to Chesterfield's speech in the House of Lords, would impress most people as one that raises the moral issue. The other day the Governor of California expressed approval of the lynching of two confessed murderers. Here, regardless of the action on the sentiments of people that he sought, it is apparent that the question of the ethical justification of the method that he employed will seem to many people to be more important than anything else in the situation.

At the risk of wearying you I repeat again that you will need a conceptual scheme of conversations between men. And I suggest that a first step in forming such a conceptual scheme is to regard the phenomenon as an interaction of sentiments, emotions and interests. There can be little doubt that not only psychoanalysts but also skillful family physicians, priests in the confessional, and experienced men of the world, when they are called upon to give advice and comfort to others, adopt such a view, just as social conventions, good breeding, good manners and tact represent the unconscious

means of others to the same end.

If a conceptual scheme is necessary, so also, as I have said, is a good method. Here I shall not take it upon myself to instruct you for I am not acquainted with any really satisfactory analysis of the method to be employed. Note that tact, good manners and the like provide a method while avoiding the necessity of a theory. It seems to be clear, however, that, in advertising and selling, methods have been developed in this country. No doubt you know more about these methods than I do. Perhaps I may, however, permit myself to make one remark. Many things that I have seen and heard lead me to believe that the conceptual schemes and theories of selling and advertising that are now prevalent in this country are inadequate. They are in somewhat the same relation to a satisfactory theory that Ptolemy's bears to that of Copernicus, *i.e.*, they are more or less the inverse of a good theory. As a result of this and on account of a desire to dignify and magnify their office, I believe that business men who are concerned with advertising and selling often arrive at misleading interpretations of the process involved and then sometimes adopt unsound methods.

Much that I have said is likely to seem to you remote and vague because it is largely abstract. Therefore, I shall in conclusion describe two important historical events which, because of their analogy and because of the different conceptual schemes involved and the different methods employed, may serve to clarify this discussion.

Talleyrand went to the Congress of Vienna as the representative of the King of France. It was the business of this Congress to reestablish the European system after the Napoleonic wars. The conditions seem to have been as unfavorable to Talleyrand as they could well be. His country was occupied by foreign troops; it was the object of fear and hatred and he seemed to have not a single trump card in his hand. But he was a realist and upon reflection saw his way to attain a limited objective, namely, the frontiers of France of the year 1789, through the utilization of the sentiments of his opponents. The kings and emperors who were represented by his opponents had had a very bad time for two decades, and he knew that they would welcome the principle of legitimacy, according to which a king has a right to the territory of his ancestors. With grace and tact and skill he worked upon these sentiments and accomplished his object. This, I suggest, is an example of a correct diagnosis based upon a useful conceptual scheme and of the application of a skillful empirical method to a clearly conceived end.

A century later Woodrow Wilson went to Versailles. For him the principle of self-determination was "just." For this reason he felt that it must be adopted. He did not choose it as a result of objective diagnosis of the situation, nor did he, so far as we are aware, analyze the results that would follow upon its adoption. Perhaps it is not too much to say that the result of adopting this principle has been altogether different from what Woodrow Wilson hoped and expected.

It seems to me that in this instance Talleyrand contributed to the welfare not only of France but of Europe and that Woodrow Wilson worked harm rather than good. Talleyrand acted as a technician. I believe that some of you will do well to imitate him in trying to become technicians even though you may feel that he was in other respects a man whose conduct you would on no account be willing to copy.

THE MARKETING STRUCTURE IN THE GROCERY INDUSTRY

By NATHANAEL H. ENGLE

Grocery Manufacturing

GROCERY manufacturing in this country ranks with our leading industries. In 1929 the output of grocery products was valued at more than twelve billion dollars, which was over 17% of the total for all manufactures. In 1931, although the absolute value for the grocery industry had declined by nearly 33%, its relative position with respect to all manufactures had increased to nearly 20% of the total.[1] The growth in this industry during the past twenty years has more than kept pace with the expansion of population. Between 1909 and 1929 the value of manufactured food products increased nearly 300% as compared with an increase of only 33.5% in population between 1910 and 1930, the nearest comparable census years.

The value of products, however, is a somewhat misleading index of growth due to the fact that the data may be influenced by price changes. A better measure is an index of the physical volume of production. A close approximation to such an index may be obtained by interpreting the aggregate value relatives with the aid of a wholesale-price index. Such an index is offered in Table I for the processed food industry and for all manufacturing. This table shows that there has been a substantial increase in production in the food industry since 1909, but from column 3 it appears that

TABLE I. PRODUCTION OF PROCESSED FOODS COMPARED WITH ALL MANUFACTURES: 1909–1931
(Base for index numbers and relatives, 1929 = 100)

Year	Food Manufacturing				All Manufacturing			
	(1) Value Relatives*	(2) Wholesale Prices†	(3) Deflated Values‡	(4) Per Cent of Change	(5) Value Relatives*	(6) Wholesale Prices†	(7) Deflated Values‡	(8) Per Cent of Change
1909	26.2	64.5	40.6	.....	29.3	63.3	46.3	
1914	41.4	68.9	60.1	48.0	34.1	64.6	52.8	14.0
1919	106.0	141.5	74.9	24.6	88.1	136.0	64.8	22.7
1921	68.8	97.2	70.8	− 5.5	61.9	107.4	57.6	−12.5
1923	79.2	93.9	84.3	19.1	85.9	107.6	79.8	38.5
1925	86.7	105.5	82.2	−2.5	89.0	107.2	83.0	4.0
1927	91.6	100.7	91.0	10.7	89.0	100.0	88.7	6.8
1929	100.0	100.0	100.0	9.9	100.0	77.5	100.0	12.7
1931	68.3	70.9	96.3	−3.7	58.7	.....	75.7	−24.3

* Based upon value of products as shown by the United States *Census of Manufactures*.
† Mills, F. C., "Economic Tendencies in the United States," National Bureau of Economic Research, Publication 21, 1933. The "Processed Foods" price index, page 588, and the "All Manufactured Goods" price index, page 584, were converted to the same base, 1929.
‡ This index is derived by dividing the value relative by the wholesale-price index for each year. The deflated-value index is roughly equivalent to an index of the physical volume of production.

[1] United States *Census of Manufactures, 1929*, Volume II; and mimeographed reports for the Census of Manufactures, 1931. The term "groceries" as here used includes processed food of all kinds and such inedible commodities as soaps, cleaning compounds, and household supplies which are normally handled by the grocery trade.

this increase is not so great as the value figures indicate. It is also noteworthy that the fluctuations for the food industry were usually less extreme than were those for all manufactures, as may be seen by comparing columns 4 and 8. In the two depression years of 1921 and 1931, particularly, the food industry maintained its position much better than all manufactures, which indicates that this industry may have a stabilizing influence upon production during bad years. Since 1931 there has been a slight decline in production by food manufacturers according to the Federal Reserve Board index, the year 1932 being 3 points below 1931. At the same time the index for all manufactures fell 17 points. The monthly index numbers for 1933, however, show a recovery for the grocery industry, the March figure being 90 as compared with 83 in March, 1932, the April figure being 99 as compared with 84 in 1932, and the July figures being 100 and 82, respectively, for 1933 and 1932.[2]

Manufacturers' Sales Channels

Distribution channels, developed to accommodate the flow of billions of dollars worth of grocery merchandise, are highly complex and they have, until recently, been very inadequately measured. Quantitative data of the Census of Distribution now afford for the first time the basis for analyzing this marketing system. The first step in this analysis deals with the channels which manufacturers have used in reaching their markets.

The most important single type of outlet utilized by grocery manufacturers has been the wholesalers.[3] Ove one-third of the total volume of sales of all grocery and meat products was distributed through this type of middleman. This figure would undoubtedly be much higher if sales made to wholesalers through manufacturers' wholesale branches were known. Of the sales reported by manufacturers, nearly 40% of the processed food, other than meat, of which the amount was 20%, and over 45% of the inedible grocery products passed through the wholesalers' hands.

Manufacturers' wholesale branches accounted for approximately one-quarter of the total sales of all food and grocery producers. They were used by manufacturers of processed foods, other than meat, for the disposal of nearly 15% of total sales, and by producers of inedible grocery items to sell nearly 30% of their total volume; in the meat trade, packers' branches and other wholesale branches were used for slightly over 45% of the total meat sales. In addition to the use of wholesale branches, manufacturers made use of other channels to avoid the regular wholesalers. Sales were made direct to retailers to the extent of 27.7%, including 9.3% to chain-store warehouses; and through manufacturers' retail branches to the consumer to the extent of 3.2% of total sales of all grocery producers. Thus, by 1929 the wholesalers' share of the business had been greatly reduced by various devices, although he still retained a position of dominance in the trade.

As far as it was possible to determine from the statistics collected by the Census of Manufactures, agents and brokers were used by grocery manufacturers to sell 11.8% of their total in 1929 at f.o.b. factory values. Perhaps a more reliable figure is that of the

[2] Federal Reserve Board *Bulletins*, 1933. The average for 1923–1925 = 100.

[3] Based on "Distribution of Sales of Manufacturing Plants," United States *Census of Distribution*, No. I.G.—202, 1932.

Census of Wholesaling which reported 1,851 agents and brokers with net sales of $1,751,993,000, which is over 19% of the total volume of wholesale grocery business at wholesale values.

The Wholesale Market Structure

The foregoing discussion, based upon reports made by the manufacturers, paves the way for a closer examination of the various types of marketing establishments in the grocery trade as reported by the establishments themselves to the Census of Distribution. The analysis of grocery wholesaling, as shown in Table II, is derived from the basic statistics compiled by the Wholesale Census and presented in a special study of the grocery trade.

The conclusion reached from the manufacturers' reports is thus borne out by the wholesale trade statistics. Although merchant wholesalers, general-line and specialty combined, were the most important type of outlet in the grocery market, manufacturers' wholesale branches together with chain-store warehouses have offered a significant threat to the old-line wholesaler.

TABLE II. TYPES OF WHOLESALE ESTABLISHMENTS IN THE GROCERY TRADE AND VOLUME OF SALES, 1929*

Types of Establishment†	Number of Establishments		Net Sales	
	Number	Per Cent of the Total	Thousands of Dollars	Per Cent of the Total
Total	13,618	100.0	9,118,641	100.0
Wholesale merchants (general line)	4,776	35.1	2,660,450	29.2
Agents and brokers‡	1,851	13.6	1,751,993	19.2
Manufacturers' wholesale branches	2,315	17.0	1,480,162	16.2
Chain-store warehouses§	234	1.7	1,457,408	16.0
Wholesale merchants (specialty)‖	3,149	23.1	901,863	9.9
Cash-and-carry wholesalers¶	362	2.7	101,188	1.1
Wagon distributors¶	178	1.3	18,999	0.2
All other types	753	5.5	746,577	8.2

* Engle, N. H., "Groceries and Food Specialties," U. S. Bureau of the Census, 1933, pp. 34 and 35.

† It should be noted that these percentages differ from those given above for the same types of businesses, because they constitute subdivisions of two different statistical universes. The first was the total volume of sales reported by manufacturers at f.o.b. factory prices. The second is the total volume of sales reported by the wholesale establishments at wholesale selling prices. The difference between these two totals, after duplication is eliminated, roughly measures the costs and profits involved in grocery wholesaling in its broadest sense. See Engle, "Groceries and Food Specialties," pp. 16–18.

‡ It should be noted that agents and brokers are not a strictly coordinate class since they sell largely to other types of wholesalers, chains, *etc.*

§ The use of the expression "sales" for chain-store warehouses is not strictly accurate since sales are such only in accounting terms. The goods are distributed and billed to the retail outlets where actual sales are made. However, the census statistics were taken at wholesale rather than retail values, which makes them comparable with other wholesale statistics.

‖ Specialty wholesalers are those who specialize in flour, sugar, coffee, or other single commodities or restricted lines.

¶ Particular interest is attached to the cash-and-carry wholesalers and to the wagon distributors, not because of their absolute significance, but because they illustrate the difficulty experienced in determining the relative importance of a particular development in advance of the complete knowledge of the facts. The amount of attention given these two types has created the impression that they were becoming very important links in the marketing chain, but the facts do not reveal that either type had made much headway by 1929, at least; together they accounted for but 1.3 % of total sales in the wholesale grocery trade.

Sectional differences within the industry are deserving of special consideration by marketing executives. Table III gives a comparison of sales by wholesale grocery establishments with population for the nine geographic divisions of the United States. The data are in the form of percentages of the total for all wholesale grocery sales,

sales of general-line grocery wholesalers, and total population. It is likely that the larger percentage of total business, as compared with that of general-line wholesalers, in the Middle Atlantic states is due to the large volume of brokerage transactions in New York, Philadelphia and other Middle Atlantic wholesale centers.

TABLE III. COMPARISON OF SALES BY WHOLESALE GROCERY ESTABLISHMENTS WITH POPULATION BY GEOGRAPHIC DIVISIONS, 1929*

Geographic Area	Per Cent of Total Wholesale Grocery Sales	Per Cent of Sales by General-line Wholesalers	Per Cent of Total Population
United States.....	100.0	100.0	100.0
New England.....	6.0	4.3	6.6
Middle Atlantic...	29.0	16.4	21.4
East North Central	19.1	16.7	20.6
West North Central	10.5	13.0	10.8
South Atlantic....	9.7	13.3	12.9
East South Central.	4.7	8.9	8.1
West South Central	8.6	14.2	9.9
Mountain.....	2.2	4.3	3.0
Pacific.....	10.2	8.9	6.7

* Engle, "Groceries and Food Specialti

Despite these sectional differences, grocery wholesaling is much more highly localized than the wholesale drug, hardware or radio trades. A high degree of correlation exists between wholesale grocery sales and population for both general-line wholesalers and for all grocery wholesaling.[4] These are facts which should not be ignored by manufacturers who contemplate changes in their sales channels. Direct selling in the grocery field, for example, is apt to be more difficult as well as more costly than it is in other trades where the market is more highly concentrated. Further light is thrown on this problem by the statistics on operating costs for the various competing sales channels.

Wholesaling Efficiency as Measured by Operating Expenditures

The total operating expenses for seven types of wholesale distributors are shown in Table IV in the form of frequency distributions. The average expenses for each group may be taken as a fairly reliable measure of the efficiency of the group in performing the marketing functions which each has assumed. Three averages, the mode, the median and the arithmetic mean, are computed for each type of wholesaler. The average operating expenses for brokers were the lowest of the group, those for cash-and-carry wholesalers and for chain-store warehouses being but little higher. These three types constituted the low-cost groups of wholesalers. Their costs were quite close together and may be said to reflect the limited marketing functions which they perform. For the chain-store warehouses, the low operating expenses are partly due no doubt to the integrated system of purchase and delivery of merchandise which the chain method has made possible, and partly due to the fact that manufacturers perform some of the wholesale functions for the chains. The highest average costs were those of the manufacturers' wholesale branches and wagon distributors, ranging from 13.5% to 17.7% of net sales for the former, and from 10.4% to 15.4% for the latter. The wholesale merchants, both general-line and specialty, occu-

[4] See Special Trade Studies, *Census of Wholesaling*, U. S. Bureau of the Census, by T. N. Beckman and by the author. In the grocery-trade study, correlation coefficients between sales and population are shown to be 0.9333 and 0.926 for all grocery wholesaling and for general-line wholesalers respectively.

pied a medium ground with costs considerably higher than the chain-store warehouses but lower than manufacturers' wholesale branches. No separate data are available for voluntary or

establishments. In New England three types of wholesalers, agents and brokers, manufacturers' sales branches and general-line wholesalers, had higher than average expenses. In the Moun-

TABLE IV. FREQUENCY DISTRIBUTIONS OF TOTAL OPERATING EXPENSES FOR GROCERY TRADE BY TYPE OF ESTABLISHMENT, 1929*

Total Expenses as Per Cent of Net Sales	Agents and Brokers	Cash-and-carry Wholesalers	Chain-store Warehouses	Manufacturers' Sales Branches	Wagon Distributors	Wholesale Merchants (general line)	Wholesale Merchants (specialty)
Total	1,851	361	234	2,315	178	4,776	3,149
Under 2%	1,049						
Under 4%	1,411	166	108	112	13	569	277
4 to 8	197	147	68	215	42	1,853	649
8 to 12	58	30	23	337	27	1,504	577
12 to 16	48	8	11	397	32	527	400
16 to 20	22	1	5	203	20	164	318
20 to 24	19	2	4	160	5	64	256
24 to 28	19	2	4	213	17	39	167
28 to 32	14	.....	2	184	3	20	139
32 to 36	6	.....	1	150	5	9	94
36 to 40	3	2	2	111	4	3	54
40 to 44	8	1	2	64	3	7	43
Over 44	46	2	4	169	7	17	175
Average Expenses in Per Cent of Net Sales							
Mode	2.0	3.6	4.0	13.5	10.4	7.0	8.9
Median	2.6	7.9	4.5	17.7	12.6	7.9	12.7
Arithmetic Average	2.0	4.5	3.5	13.6	15.4	9.1	10.2

* Engle, "Groceries and Food Specialties," p. 68.

cooperative chain wholesaling for the entire country. A sample analysis, however, shows costs of wholesaling as low as 4.63% of net sales for wholesale establishments selling exclusively to retail member stores cooperating with them.[5]

Geographical differences account for some of the variations revealed in the spread between high-cost and low-cost figures for the various types of wholesalers. Table V presents a geographic distribution of total expenses for four of the most important types of wholesale

tain and Pacific states operating expenditures for agents and brokers and chain-store warehouses were much more above the average, and in the East South Central and Mountain groups, the manufacturers' sales branches had the highest costs, the ratio being 4.3 points above the average. The reasons for these differences are hard to determine since there is little uniformity in the variation shown by the different types of wholesalers in the various parts of the country. Among the factors at work are wage differentials, population density and the closely related sales potentials, size of the

[5] Engle, "Groceries and Food Specialties," p. 89. Figures for wholesaler-sponsored chains only.

business, and extent of the sales territory covered. A few of these factors may now be measured for the first time and their influence upon operating expenses appraised.

TABLE V. GEOGRAPHIC DISTRIBUTION OF TOTAL OPERATING EXPENSES, GROCERY TRADE, 1929*

Geographic Division	Total Operating Expenses: Per Cent of Net Sales (arithmetic averages)			
	Agents and Brokers	Chain-store Warehouses	Manufacturers' Wholesale Branches	Wholesale Merchants (general line)
United States	2.0	3.5	13.6	9.1
New England	3.6	3.1	13.9	11.7
Middle Atlantic	1.7	3.3	12.3	9.6
East North Central	2.0	3.4	15.9	11.0
West North Central	1.8	4.1	16.1	9.9
South Atlantic	1.7	3.8	14.5	7.6
East South Central	1.8	4.4	17.9	7.8
West South Central	1.7	2.8	10.8	8.1
Mountain	2.4	5.9	17.9	8.7
Pacific	2.6	5.8	11.0	7.4

* Engle, "Groceries and Food Specialties," p. 66.

Size of Business.—The influence of the size of the business upon the operating cost ratio is brought out in the above tabulation, Table VI. For all but general-line wholesalers there is the tendency for costs to decrease as the size of the business increased. Indeed, for chain systems the maintenance of a warehouse appears to have been quite a costly luxury until billings reached a volume in excess of $300,000 at wholesale values. In the wholesale merchant class, which is perhaps the most homogeneous group of all, the size of business seems to have had a different influence. Total expense ratios declined to a low point with sales between $200,000 and $300,000 per year and increased thereafter as the size of the business grew, reaching a point very nearly as high for the largest houses as obtained for the smallest.[6]

Influence of Sales Territory Radius.—One reason for the increase in operating expenses for the large-scale wholesale merchants is that large sales volume is often sought by expanding sales effort over an ever-widening area. The in-

TABLE VI. DISTRIBUTION OF TOTAL OPERATING EXPENSES BY SIZE OF BUSINESS, GROCERY TRADE, 1929*

Size of Business (Net sales in dollars)	Total Operating Expenses: Per Cent of Net Sales (arithmetic averages)			
	Agents and Brokers	Chain-store Warehouses	Manufacturers' Wholesale Branches	Wholesale Merchants (general line)
Total	2.0	3.5	13.6	9.1
Under 40,000	.....	.....	20.9	13.8
50,000 to 100,000	8.6	15.9	20.0	3.9
100,000 to 200,000	5.1	13.2	26.2	8.3
200,000 to 300,000	3.4	11.4	25.0	8.1
300,000 to 400,000	3.2	5.3	24.9	8.4
400,000 to 500,000	3.4	7.7	22.3	8.3
500,000 to 1,000,000	2.1	6.9	21.0	8.9
1,000,000 to 2,000,000	1.8	5.5	17.9	9.1
2,000,000 to 4,000,000	1.6	4.9	16.1	8.5
4,000,000 to 8,000,000	2.0	5.4	10.9	10.3
8,000,000 to 15,000,000	1.3	3.2	.....	
15,000,000 to 25,000,000	0.5	3.3	.....	12.9
25,000,000 and over	.....	2.4	.....	

* Engle, "Groceries and Food Specialties," pp. 75–82.

[6] See Engle, N. H., "Size of Business Unit as a Factor in Efficiency of Marketing," 23 *American Economic Review* 1, Supplement for March, 1933, p. 101.

fluence of large sales territories upon operating expenses is shown for three groups of general-line wholesalers in Table VII. With few exceptions total expenses increased as the length of the sales territory radius increased. This tendency was so consistent as to justify the conclusion that straining after volume by expanding the sales territory is an unwise policy as far as operating efficiency is concerned. If it were possible to increase gross margin at the same time, it might be a justifiable business policy on the grounds that net profits would not suffer. But the fact is that competition usually becomes keener, the more remote the territory, and hence it is not probable that increased margins could be secured.

TABLE VII. AVERAGE OPERATING EXPENSES FOR GENERAL-LINE WHOLESALE MERCHANTS BY SIZE OF SALES TERRITORY, GROCERY TRADE, 1929*

Length of Sales Territory Radius	Average Operating Expenses: Per Cent of Net Sales, Wholesale Merchants with Annual Net Sales of:					
	$100,000 to $300,000		$500,000 to $1,000,000		$1,000,000 to $4,000,000	
	Mode	Median	Mode	Median	Mode	Median
Total	7.95	8.48	8.74	9.08	8.76	9.12
75 miles	7.84	8.29	8.57	8.76	8.27	8.61
150 miles	8.33	9.20	9.02	9.83	9.51	9.49
300 miles	11.11	11.75	9.17	9.66	9.00	9.23
500 miles	7.50	10.00	9.62	10.42	8.43	9.23
Over 500 miles	10.00	13.00	13.00	12.75	13.33	9.38
All other	.....	.....	12.50	12.50	10.00	10.00

* Engle, "Groceries and Food Specialties," p. 77.

In concluding this phase of the analysis it is noteworthy that grocery wholesaling is handled very largely by three types of establishments, independent wholesalers, manufacturers' wholesale branches and chain systems. It may seem surprising to many that the wholesaler continues to occupy as important a position in grocery distribution as the facts reveal. The explanation, while partly to be found in the inertia which tends to perpetuate institutions once established, probably lies in the fact that the wholesaler is a specialized agency well designed to perform essential marketing functions. No data are available showing what has happened to his relative position since 1929, but it is quite probable that it has improved somewhat. The excessive overhead burden of maintaining branch warehouses and elaborate salesforces for contacting many widely-scattered individual retailers has probably caused the manufacturer to retrench during the past year or two. Even in 1929 the operating costs of wholesale branches were considerably higher than those of regular wholesalers. Whether or not the wholesalers will be able to capitalize on this gift of the depression remains to be seen. Certainly the competition from chain systems constitutes a significant threat to their position. The wholesale divisions of chains have much lower operating expenses than do the old-line wholesalers. However, they do not perform the same functions, and it may be argued that the wholesalers will have a place as long as there are independent retailers. The growth of cooperative wholesaler-retailer groups (discussed below) has been such as to suggest that the wholesaler may continue to exist for some time to come. A final factor of importance is the probable effect of the NRA codes of fair competition. Their ultimate effect upon the position of the wholesaler can only be conjectured at this time.

Retail Distribution of Groceries

Grocery retailing which bridges the gap between the wholesaler and the ultimate consumer is better known than wholesaling because of its direct, intimate contacts with the consuming public. The exact quantitative measurements of retailing, however, have

never been available heretofore. As a result of the first census of retailing it is now possible to sketch in the broad outlines of the retail market with considerable accuracy and to supply certain essential details of the picture as well.

Food and grocery commodities were sold in a number of different kinds of stores including, in addition to food stores proper and restaurants, general stores, department stores, general merchandise stores and feed stores. The most important of these were the food stores with 481,891 establishments having sales of eleven billion dollars. Of this number there were 307,425 straight grocery and combination grocery-and-meat stores accounting for over seven and one-third billion dollars in sales. It is this latter group which is normally looked upon as the retail-grocery field, and the following analysis will be confined to these stores.

Extent of Grocery Chain Business.—One of the major developments in grocery retailing is the extent to which chain stores have become a dominant factor in the trade in recent years. For all grocery stores (groceries only and groceries and meats) the chains of two or more units accounted for 19% of the stores and nearly 43% of the business in 1929. Single-store independents operated 74% of the stores and secured slightly over 52% of the total sales. The remainder was accounted for by miscellaneous types, such as rolling stores, commissaries, roadside stands, *etc.* The extent of chain-store growth has not been uniform for all kinds of grocery stores. Greatest progress has been made in the straight-grocery field where the chains first got their start and where over 48% of the business was conducted by the chains in 1929; in contrast, only 38% was accounted for by chains operating combination grocery-and-meat stores.

The rapid growth of the chains[7] in the grocery trade, from a position of

TABLE VIII. CHAINS AND INDEPENDENT GROCERY DISTRIBUTION, 1929*

Type of Store	Grocery Stores (without meats)			Combination Stores (groceries and meats)		
	Number of Stores	Net Sales		Number of Stores	Net Sales	
		Amount†	Per Cent		Amount†	Per Cent
Total	191,876	3,449,129	100.0	115,549	3,903,662	100.0
Independents (single-store)	139,440	1,588,914	46.1	88,157	2,238,837	57.3
Chain Stores (total)	38,174	1,662,143	48.2	20,929	1,482,063	38.0
2 or 3 store groups	2,805	85,891	2.5	3,680	224,336	5.8
Local chains	9,754	367,643	10.7	6,192	343,571	8.8
Sectional chains	9,044	361,605	10.5	2,669	219,377	5.6
National chains	16,571	847,004	24.5	8,388	694,779	17.8
All other types‡	14,262	198,072	5.7	6,463	182,762	4.7

* "Retail Distribution, Summary for the United States," 1933, p. 69. U. S. Census of Distribution.
† In thousands of dollars.
‡ Includes commissaries, direct selling, rolling stores, roadside stands, *etc.*

[7] See "Growth and Development of the Chains," Federal Trade Commission Report, Senate Document, 1933.

minor importance, as recently as the pre-war years, to their present place, with over 40% of the total business, has called for many adjustments on the part of independent grocery distributors. One of the most far-reaching of these is the resort to quasi-chain methods through the formation of voluntary or cooperative chains.[8] There are at least two types of these chains which deserve mention, the retailer-owned and wholesaler-retailer cooperatives. The former, which is the older type historically, consists of groups of retailers who have banded themselves together and organized their own wholesale houses in an effort to secure the advantages of large-scale buying. The wholesaler-retailer cooperatives are unlike the other type, since their chief object is not to secure buying advantages for retailers but to improve the competitive position of the wholesaler through a closer bond with his better retail customers. Both types have had a rapid growth which parallels, if it does not outstrip, that of the regular chains. The American Institute of Food Distribution estimated that in March, 1932, there were 688 voluntary chains of both types with 83,224 retail stores.[9] It is, therefore, obvious that the voluntary chain is a factor to be reckoned with in any analysis of the competitive structure of the industry.

TABLE IX. COMPARISON OF GROCERY CHAIN-STORE EXPENSES WITH EXPENSES FOR ALL OTHER GROCERY STORES, 1929*

Item	Chain Stores with 4 or More Units		All Other Grocery Stores (independents)	
	Amount	Per Cent of Net Sales	Amount	Per Cent of Net Sales
Number of stores	53,466	.....	253,959	
Number of chains	788			
Net sales	$2,872,773,756	100.00	$4,480,017,455	100.00
Total expenses†	408,752,249	14.23	862,910,748	19.26
Total salaries	217,997,076	7.59	548,885,499	12.25
Rent	68,478,897	2.38	119,143,529	2.66
All other expenses†	122,276,276	4.26	194,881,720	4.35

* Based upon data from "Retail Distribution, Food Chains," 1933, U. S. Bureau of the Census. The chain-store data were subtracted from the totals for all grocery stores to secure figures for all other stores, which are chiefly independents.

† Only the retail-store expenses are shown. Warehouse and central-office administrative expenses were treated as wholesale expenses by the Census and do not appear in the retail statistics. In computing total operating expenses the Retail Census Bureau attempted to approximate the full economic costs which should be charged against the business. The salaries of proprietors were estimated for unincorporated companies at the rate of average wages for full-time employees. Since most of the chains are incorporated, the salary-expense figures include a much smaller proportion of estimated salaries of proprietors than is true of the independents. The "total salaries" item for the latter is shown to be 12.25% of net sales, but of this amount only 7.35% was actually paid out. This condition makes it possible for the independent retailer, who is willing to accept less than average wages and to depend upon net profits for his income, to compete on a price basis with the chains.

Retail Operating Expenses.—A problem of even greater concern than those just discussed is that of operating efficiency in grocery retailing. A measure of operating efficiency as reflected in operating-expense statistics may be

[8] See White, W. L., *Cooperative Retail Buying Associations*. New York: McGraw-Hill Book Co., Inc., 1930; and Pelz, V. H., "The Voluntary Chains," American Institute of Food Distribution, 1932.

[9] See "Cooperative Grocery Chains," Federal Trade Commission, 1932, and Engle, "Groceries and Food Specialties," p. 86.

had from census data for the 307,425 retail grocery stores considered above. Total expenses and a number of detailed expense items, such as wages and rent, are available for these establishments.[10] Since these data are for all grocery stores, they are less valuable measures of operating efficiency than are similar statistics for chain stores and independents separately. An analysis of the latter data in Table IX shows that chain-store expenses were lower by 5 points than were the nonchain costs; most of this difference was in the salary item.

These comparisons are for the retail outlets of the chains and do not include warehouse or central-office administration expenses, neither of which are found in the independent stores. Consequently the differentials in store expense measure, in part, the relative efficiency of the two types of retailing. The differences are also partly attributable to the variation in functions performed. While not all of the independent stores extend credit and make deliveries, practically all of the chains operate on a cash-and-carry basis. Thus, it might be expected that the chains would show costs which were lower, at least by the cost of credit and delivery. In view of these facts it appears that there is less difference in the relative efficiency, as measured by operating costs, of the retail stores operated by chains and those operated by independents than is commonly believed. The comparison of the retail outlets is not adequate, however, since the chain is an integrated wholesaling-retailing business which should be compared as a whole with other distribution systems.

[10] See "Retail Distribution, Summary for the U. S.," 1933, Tables 1A and 2A, U. S. Bureau of the Census.

Comparative Efficiency of Principal Wholesale and Retail Sales Channels[11]

In addition to cooperative chains, there are three outstanding types of wholesale-retail distribution systems open to manufacturers for the marketing of their products, namely, the independent wholesaler-retailer, the manufacturer's wholesale-branch retailer and the chain system. In order to compare the operating expenses of these three marketing channels,

TABLE X. COMPARATIVE TOTAL EXPENSES OF THREE TYPES OF GROCERY DISTRIBUTION, 1929

Type of Distribution	Total Expenses: Per Cent of Net Sales	
	At Wholesale Values*	At Retail Values†
Wholesale merchants	9.1	7.8
Manufacturers' wholesale branches	13.6	11.6
Chain-store warehouses	3.5	3.1
Independent retailers	.....	16.9
Retail chain stores	.....	14.2
Combined:		
Wholesaler-retailer	.....	24.7
Chain system‡	.....	17.3
Manufacturers' wholesale-branch retailer	.....	28.5

* See Table VI.

† Since no data were collected by the Census Bureau on net profits, the estimated wholesale costs at retail values are somewhat too high. It has been assumed that since independent retailers add 16.9¢ to the wholesale cost of the goods, the wholesale expenses of 9.1¢ must be compared not with $1 but with $1.169. Thus, 9.1/116.9 equals 7.8 %. Actually, net profits of perhaps 2¢ on the dollar should also have been added.

‡ In combining chain-store-warehouse and retail-chain-store costs it is assumed that all retail chains had warehouses. This is not true, but since the largest part of the chain business was handled by chains with warehouses the assumption is substantially accurate.

[11] For an earlier comparison of chains and independents see Schmalz, Carl N., "Independent Stores *Versus* Chains in the Grocery Field," IX HARVARD BUSINESS REVIEW, 4, July, 1931, p. 431, which is based upon "Expenses and Profits in the Chain Grocery Business in 1929," Bulletin No. 84, Harvard Bureau of Business Research. A criticism of this report has been issued by the National Wholesale Grocers' Association.

the wholesale statistics which are based upon wholesale values must first be converted to the same basis as the retail statistics, that is, percentages of the consumer's dollar. Such comparison, as shown in Table X, corroborates the general belief that chain systems have the lowest total marketing expenses. The combined expenses of the independent wholesalers and retailers were 7.4 points higher than those of the chains, while the cost of selling through manufacturers' wholesale branches and independent retailers is the highest of the three methods of marketing.

This analysis is open to the criticism that the data are averages for all types of commodities handled by the different types of marketing establishments. For manufacturers' wholesale branches and for independent grocery wholesalers, these commodities are chiefly manufactured or processed articles. But for the retail stores, the goods sold include fresh fruits and vegetables, fresh meats, and dairy and other agricultural products, most of which are supplied by other than grocery wholesalers or manufacturers' wholesale branches. The data on operating expenses for other food wholesalers, as given by the Census of Wholesaling, however, show that the average is approximately the same as that of grocery wholesalers.[12] There still remains another fact which invalidates in part such a comparison. Many retail stores buy their produce not from wholesalers, but directly from the farmers. This is an important consideration in the smaller communities, but probably does not bulk large in the totals. If it were possible to segregate the operating costs by commodities, as has been done in a few case studies by Wroe Alderson of the United States Department of Commerce, a better comparison might be made. The best available data on this point, comparing chains and independents, were recently published by the Federa Trade Commission for the cities of Washington, Memphis, Cincinnati and Detroit.[13] These figures presumably include net profits, since they were secured by subtracting the cost of the articles from the selling price. They should, therefore, be somewhat higher than the averages in Table X. The two sets of figures are not comparable except in a very general way, since one covers the entire United States and is calculated on total sales, while the other analyzes selected commodities for a limited number of cities. It is significant, however, that the advantage shown for the chain system over the independents does not appear to be as great as might have been expected, especially when allowance is made for the difference in marketing functions performed by the two systems.

[12] "Wholesale Distribution, Summary for the U. S.," 1933. Table on page 86 gives the average total expenses for fruit and vegetable wholesalers as 9% of net sales; for meat wholesalers as 9.6% and for the entire food group as 10.5%.

[13] See press releases by Federal Trade Commission. These reports show that for identical grocery items the chains have an average gross margin from 3.18% to 4.02% of net sales less than independents in Washington, and a differential advantage from 2.93% to 4.82% in Memphis, depending upon the method of weighing used for each city.

THE MARKET ACTION OF NEW ISSUES—A TEST OF SYNDICATE PRICE PEGGING

By W. H. STEINER AND OSCAR LASDON

Unwillingness to Buy New Bond Issues

IN recent years the investing public has been increasingly reluctant to buy new bond issues. Generally speaking, investors have not felt disposed to purchase such securities until after the dissolution of the distributing syndicates. In other words, there has been a tendency to withhold purchases until a natural market has developed in the particular security offered.

The termination of the syndicate usually marks the beginning of a genuine market. With the removal of syndicate bids, artificial support is withdrawn and a "pegged" market ceases to exist. The price of the issue then fluctuates in response to ordinary market forces. Only when the latter condition has prevailed, have many investors shown a willingness to enter the market.

Of course, such a policy on the part of the individual investor is either the result of some previous experience in the purchase of a new issue or else it represents a general opinion, on his part, that it would be more profitable to purchase the issue after it has been "seasoned" somewhat marketwise.

With a view to determining the accuracy of such a belief, a study of the market action of new issues was undertaken. The results of this investigation should disclose whether any factual basis exists for the public antipathy toward new issues.

Type of Security Used for Study

In order to present a more accurate analysis, and to safeguard against possible erroneous conclusions, several limitations have been observed.

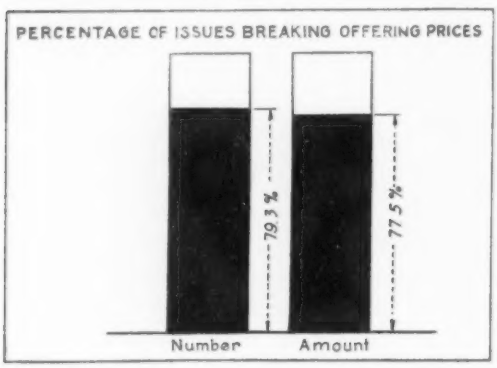
In the matter of time, the study has been confined to the period 1924–32. As to the type of security, domestic corporation issues form the basis of this analysis. Government and municipal issues have been excluded, as well as foreign corporation issues, with the exception of Canadian industrial and utility bonds. Furthermore, because short- and semishort-term securities normally show little variation in price, those issues maturing in less than ten years from the date of offering have not been included. Moreover, only single offerings of amounts of $10,000,000 or more have been considered.

Naturally enough, only those issues of which there were full price records were studied. This confined the investigation to those bonds listed on the New York Stock and Curb Exchanges following the date of offering. In addition, the issues included in this study represent new offerings, no prior offerings of these same securities having been made. They do not represent offerings of additional amounts of securities which had been floated previously. With the exception of certain convertible issues, none of the obligations included in this study were exchange offerings made to holders of outstanding securities; they had to be sold to investors.

A total of 288 issues, amounting to $8,427,900,000, met these requirements during the nine-year period studied. The data were broken down; offerings were classified as to the year of issue

and were then segregated as to the type of obligation, whether convertible, rail, utility or industrial. Next, a tabulation was made of those issues breaking their offering prices within a period of six months following the date of offering.[1] The analysis was then carried further. The statistics were examined to ascertain whether new issues showed a tendency to break their offering prices at any particular time

CHART I



interval following their origination, as well as to determine the extent to which the obligations depreciated in price.

Issues Breaking Their Offering Prices

Of the 288 issues studied, 227, or 78.7%, broke their offering prices within the six-month period. However, it is obvious that convertible issues are influenced by other forces, in addition to those which govern the price movements of ordinary bonds. Deducting convertible obligations in order to obtain a homogeneous group, it was found that 203 out of 256 nonconvertible obligations, or 79.3%, broke their offering prices within the stipulated period.

Considering amounts instead of number of issues, $6,327,700,000, or 75.1%, of the sum total of $8,427,900,000 worth of issues studied broke their offering prices. When the adjustment was made for convertible obligations, $5,467,600,000, or 77.5%, out of a total of $7,057,000,000 declined below the original price. Chart I depicts graphically the proportion of the total number and amount of nonconvertible issues that broke the offering price.

Further inquiry was made to determine whether any particular type of obligation acted adversely immediately after issue. In other words, how do the market actions of new rail, utility and industrial obligations compare? In general, an analysis shows that utility issues acted best marketwise, although the rails and industrials followed closely in the order named. Relatively speaking, convertible issues presented the best showing. It must be realized, however, that the comparison is not entirely accurate since, as has been pointed out, convertible bonds are influenced by factors other than those affecting ordinary obligations. The following table presents the data in comparative form:

TABLE I

Type Issue	Number of Issues	Number Breaking Offering Price	%	Amount (000,000 omitted)	Amount Breaking Offering Price (000,000 omitted)	%
Convertible	32	24	75.0	$1,370.9	$ 860.1	62.7
Rail	73	59	80.8	1,965.3	1,556.9	79.2
Utility	135	101	74.8	3,673.8	2,722.8	74.1
Industrial	48	43	89.6	1,417.9	1,187.9	83.8

This situation is set forth in Chart II. The dotted line represents the percentage of the number of those issues

[1] As a general rule, most issues start to acquire "seasoning" within the space of six months following the date of offer. By that time, in all but a few cases, the original distributing syndicate has been disbanded and the issue is left to fluctuate in price without being accorded artificial support.

breaking their offering prices; the black portions of the bars denote the percentage of amounts.

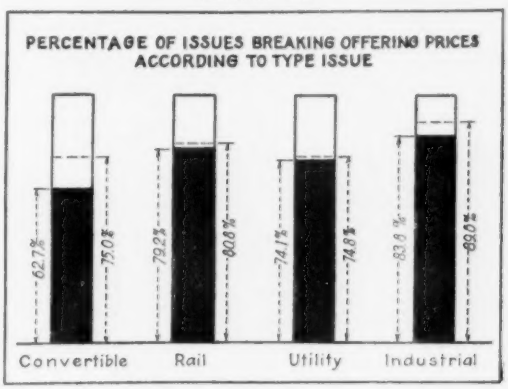
What has been the experience of new bond issues in different years? To what extent does a rising or declining bond market affect the prices of newly issued securities? The statistics gathered seem to indicate that the mortality rate is heavy even in those periods when there is a strong and healthy bond market. Chart III compares the course of the bond market with the annual proportion of nonconvertible new issues breaking their offering prices.[2] Comparisons both as to number and amount of issues are presented.[3]

During the years 1924–27, and again in 1930, bond prices were rising. However, it is to be noted that even in these periods a substantial proportion of new issues broke their offering prices within the six-month period. This leads to the conclusion that the withdrawal of the underwriting syndicate, even in a good bond market, generally results in prices slipping below the levels at which they were initially supported.

It may also be observed that in 1928, when money rates began to harden, all the issues studied succumbed to the influence of a declining bond market. Thus, as soon as underwriting support was removed under unfavorable conditions, price decline became inevitable. This conclusion is also supported by the 1931 statistics shown in Chart III.

The year 1932 seemingly presents a flat contradiction of the above statement. In that year, only slightly more than 33% of the total number and amount of issues broke their offering prices. This, however, can easily be explained. The demoralized condition of the bond market hindered the flotation of securities. Few obligations were issued and those were of the highest type, being largely good operating utility issues. There was a cautious approach to investment channels. Great care was taken to set the proper date of offer and to price the issue attractively. The placing of the major portion of these issues with individual and institutional investors was probably assured before formal offer.

CHART II



The statistics upon which Chart III is based are as follows:

TABLE II

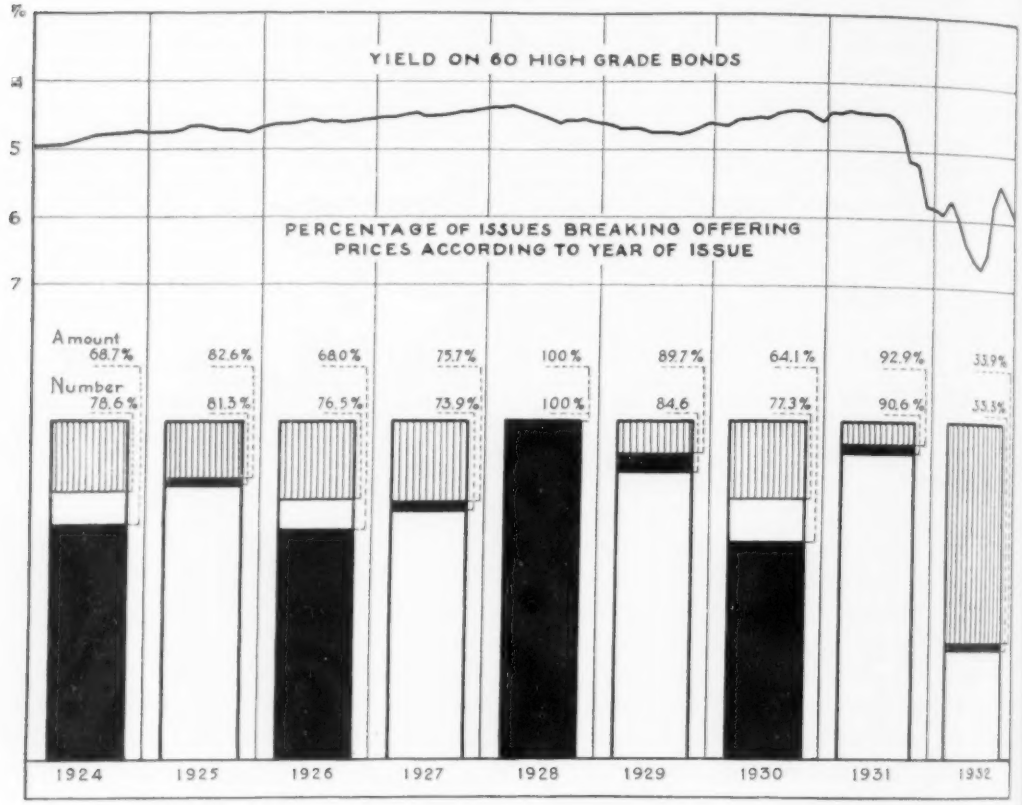
Year	Number of Issues	Number Breaking Offering Price	%	Amount	Amount Breaking Offering Price	%
				(000,000 omitted)		
1924	14	11	78.6	$ 383.1	$ 263.1	68.7
1925	16	13	81.3	482.7	398.6	82.6
1926	34	26	76.5	861.2	585.2	68.0
1927	69	51	73.9	1,965.2	1,488.4	75.7
1928	25	25	100.0	698.7	698.7	100.0
1929	13	11	84.6	346.0	310.5	89.7
1930	44	34	77.3	1,136.3	728.3	64.1
1931	32	29	90.6	1,005.3	934.3	92.9
1932	9	3	33.3	178.5	60.5	33.9

[2] Whether an issue originated in January or December of the same year, it is listed among the data for the year of issue. This is so, in spite of the fact that the second may have broken its offering price in the year following. This particular phase of the study is, therefore, not entirely accurate. Nevertheless, the conclusions are correct.

[3] The shaded area represents the minimum proportion (in either number or amount) not breaking the offering price. The use of black and white areas may be understood by comparing 1924 and 1925.

The statistics relative to convertible issues, according to year of issue, were not included in Chart III. They are, however, shown in Table III.

CHART III



Let us pursue our investigation further. So far, our study has shown that the majority of issues "break" their offering prices within a period of six months of the date of offering. The question now arises, Is there any particular interval following the date of offering during which this occurs?

Chart IV presents a time comparison showing that, of the 203 nonconvertible issues reviewed, approximately 69% "break" within three months. This is not surprising in view of the fact that this period represents the average duration of the syndicate. It has been estimated that the normal life of most syndicates ranges from two to three months. This belief is confirmed by the fact that 37.4% of the issues studied "break" within that period.

There is no doubt that a decline in the bond market helps to shorten the interval between offer and "breaking." Many issues decline below their offering prices from three to six months after the date of offer. It is a moot question as to whether or not many of these cases cannot be ascribed to the course of the bond market rather than to the removal of syndicate bids. As the average life of a syndicate, as just stated, is estimated to be less than three

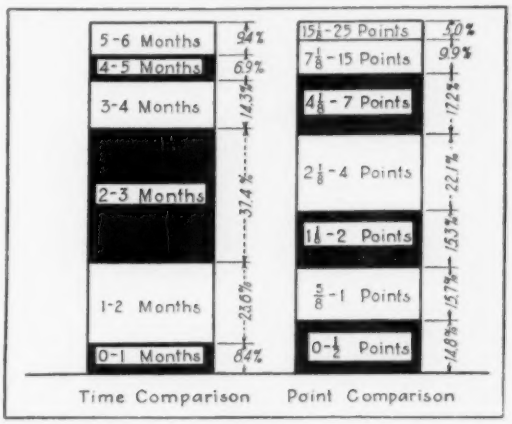
months, the explanation is a logical one.

TABLE III

Year	Number of Issues	Number Breaking Offering Price	Amount	Amount Breaking Offering Price
			(000,000 omitted)	
1924				
1925	1	1	$ 75.0	$ 75.0
1926				
1927	3	2	85.0	37.0
1928	4	2	115.2	28.0
1929	12	10	669.5	404.1
1930	11	8	376.2	266.0
1931	1	1	50.0	50.0
1932				

A comparison by points is also included in Chart IV. It shows that approximately 45% of those nonconvertible issues breaking their offering prices do not show more than a 2% depreciation during the six-month period. About 39% show a depreciation ranging from 2⅛% to 7%. The American machinery of issuance and distribution has often been criticized on the ground that our practice of "pegging" prices of new issues has invariably resulted in the investor buying at top prices. To some extent, price depreciation of new issues may be due to a declining bond market. The larger part, however, is accounted for by the removal of syndicate bids following distribution of the issue to the public. No cause for complaint would exist if the price decline, in a normal market, could be limited. Even in England, where a free and natural market generally exists in an issue from the date of offer, issues may decline as much as 2%. However, in recent years, cases of overpricing in America have been frequent and flagrant enough

CHART IV



to result in agitation for the copying of British issuing practices.

TABLE IV

Time Comparison			Point Comparison		
Number of Months	Number of Issues	%	Number of Points	Number of Issues	%
			0 – ½	30	14.8
0–1	17	8.4	⅝– 1	32	15.7
1–2	48	23.6	1⅛– 2	31	15.3
2–3	76	37.4	2⅛– 4	45	22.1
3–4	29	14.3	4⅛– 7	35	17.2
4–5	14	6.9	7⅛–15	20	9.9
5–6	19	9.4	15⅝–25	10	5.0

The material presented in Chart IV was examined further to find out whether any relationship existed between the interval during which "breaking" occurred and the extent to which price depreciated. As far as could be determined, no such relationship exists. The fact that an issue breaks its offering price within a relatively long or short period following its offer does

not indicate that the price decline will be either large or small. It is to be noted that, as a general rule, the greater proportion of severe price declines takes place in those periods when the bond market is reactionary.

The statistics included in Chart IV are shown in Table IV.

Relative Merits of Issuing Houses

The relative merits of the underwriting activities of investment banking houses and bank security affiliates have long been the subject of controversy. It was not the purpose of this study to inquire as to the superiority of one type of organization over another. However, on the basis of the material gathered, underwriting experience, as far as market action within the six-month period is concerned, seems to have been about the same. There are both good and bad examples in each division.

A comparison of small and large investment banking houses shows that the latter group generally has been more successful in issue operations. This is probably due, among other reasons, to the fact that these organizations display better judgment in pricing and timing of flotation than do their smaller contemporaries. Because of their wider clientele, they can also discriminate in favor of higher type securities.

As far as individual issuing houses are concerned, it appears that those institutions specializing in the issuance of the highest grade securities set the best record. This is particularly true in the case of one Philadelphia house specializing in the issuance of high-grade obligations.

Conclusion

The results of this investigation indicate that, as a general rule, it would be far more profitable for the average investor to purchase new issues after the process of initial "seasoning." Of course, there are instances in which issues go to a premium immediately following the offering, but these cases are the exception rather than the rule. Furthermore, it must be realized that if the demand for a particular issue is exceptionally keen, the average investor finds it practically impossible to secure any substantial amount at the offering price. Unfortunately, in these cases the desired securities are concentrated in the hands of a few dealers who allot them to their favored customers.

This study merely furnishes statistical proof of a belief that has been prevalent for many years. Of course, if every individual declined to buy new issues, flotation of securities would be impossible. Nevertheless, under the present system of issuance and distribution, the tendency on the part of the public to avoid new issues has already reached substantial proportions. Eventually, it may result in a revision of American practices somewhat along British lines.

A CHINA TRADER TURNS INVESTOR— A BIOGRAPHICAL CHAPTER IN AMERICAN BUSINESS HISTORY

By HENRIETTA M. LARSON

THERE is nothing more nearly permanent in business than change. Seasonal variations have been observed from time immemorial, and business men have long been aware of those fluctuations which are called the business cycle. The longer-time changes have not, however, been so clearly recognized, perhaps because they oftentimes span more than one lifetime of experience. Yet they are concerned with movements which at times nearly revolutionize business organization and activity. One function of business history clearly is to search out and illuminate those long-time changes of business in the past.

The first half of the nineteenth century witnessed some major developments in American business. In the early part of the century the most important business in this country was foreign trade and shipping. The outstanding figure in that world was the general merchant, like Astor and Girard, who was trader, commission merchant, warehouseman and carrier, banker, and sometimes manufacturer, all in one. The capital and experience which these merchants accumulated, coupled with the introduction of machine manufacture and the corporate form of organization, were important elements in bringing about changes which became significant in the second quarter of the century. Then American business activity shifted to the development and exploitation of the great inland. The versatile merchant gave way to the specialized business man. Very often this specialist provided only managerial ability and looked to a new class of investors to provide him with capital. By the time of the Civil War the foreign merchant was little more than a memory. Such men as the Vanderbilts, the Lawrences and Brown brothers, specialists in transportation, manufacture and banking, dominated the American business scene.

Nothing so clearly reveals the nature and course of these developments and their conditioning factors as the lives of the business men who participated in them. This article is concerned with John Perkins Cushing, one of Boston's famous China merchants of the early nineteenth century. His life neatly epitomizes the rise and decay of America's commerce with the Far East and the transfer of capital from foreign trade to internal development. For the later period it illustrates the separation of ownership and management, with the concomitant rise of an investor class, and is closely bound up with the early development of American investment banking. Cushing's career, moreover, illuminates the process of building that composite which we call American culture. As merchants had done from time immemorial, he transplanted to his home something of what he had learned to know and to like in a foreign country.

Merchant in Canton

John Cushing was born in 1787. America was at that time at the renascence of her maritime activities, the introduction to the most glorious period in her history as a carrier and trader by sea. In 1785 the *Empress of China*, proud blazer of a new merchant trail, had returned from her momentous trip to Canton. The first act passed by the new Federal Congress in 1789 was framed to protect American shipping. A year later Captain Gray returned from his trip around the globe which marked the beginning of the lucrative Northwest Coast fur trade with China. In the 1790's, troubles in Europe began to divert European merchant ships from trade. Youthful America, therefore, had the wide world for its market.

Circumstance led Cushing into trade. His was a generation which New England gave to shipping and foreign commerce as she later sent her sons into the great inland. Cushing's father was a sea captain, and the family lived for a time in a Carolina seaport. But when the parents died, the little boy John was taken charge of by his uncle, Thomas Handasyd Perkins of Boston.[1] This made it inevitable that Cushing should go into trade. His grandmother was the intrepid Widow Perkins, who after the death of her husband had carried on his foreign mercantile business and had trained her sons, James and Thomas, for trade. When Cushing came to Boston those sons were already among its outstanding merchants.

Cushing began business as a clerk in his uncles' countingroom in Boston. At that time their affairs were undergoing a significant change. The Widow Perkins had traded on the North Atlantic. Her sons rode the crest of the Northwest Coast-China trade. By 1803 their business was so large that they established a branch house in Canton, the great entrepôt of trade with the Celestial Empire, and sent a resident partner there.

John Cushing, sixteen years old (trade caught the boys young then), accompanied the partner as clerk.[2] This was to be in the nature of schooling for the boy. Thomas Handasyd Perkins wrote John long letters enjoining him to give the strictest attention to business and to exert himself unremittingly to further the interests of his firm. For encouragement, he was given a small sum with which to venture for himself. The boy was advised to read his Shakespeare diligently, lay off juvenile pursuits, and not to dissipate as the young people about Boston were wont to do!

Cushing and his superior had only just become established in Canton when in 1805 illness forced the latter to leave.[3] There was no one but young Cushing to take charge of the Perkins affairs. On hearing of this, Thomas Handasyd became apprehensive. He urged on the boy that he had opportunities and responsibilities "such as few men ever met with." Referring to his mother, the merchant-woman Widow

[1] "Family Reminiscences" in *J. Elliot Cabot*, an autobiography (Boston, 1904). This book, together with other material which has been very helpful, was loaned to the writer by Professor Philip Cabot.

[2] The facts here given on Cushing's career as a merchant have been taken almost altogether from the T. H. Perkins Papers in the Massachusetts Historical Society and the Cushing Papers in Baker Library, Harvard University; from the former, T. H. Perkins' journal, letter books and letters, and a few early account books of Perkins & Co. of Canton. The Cushing Papers relate to Cushing's trading interests from the time of his return to America in 1828, and for the earliest years consist of a letter book and a miscellaneous account book.

[3] On Cushing's early stay in China I have drawn from the Perkins Papers.

Perkins, Thomas Handasyd enjoined his nephew to "let the sage councils of y'r good grandmother still vibrate on your ear, and let them sink deep in your heart."

At first it seemed that young Cushing was to justify the uncle's apprehensions. He did not write a word home. Then came the first season's report and the first cargo sent by Cushing. So satisfactory was his work that he was immediately made resident manager and partner in Perkins & Company of Canton, the commission house established by the Boston brothers to participate in the flourishing China trade.

Cushing headed Perkins & Company in Canton for over twenty years. In that time his company became one of the strongest foreign trade houses in the Chinese Empire outside of the Honorable East India Company. Perkins & Company not only handled their own trade and many of the ventures in which they had shares but they also received consignments from others on commission.[4] How large a business they did can never be known, for it is reasonable to conclude that many of the Perkins records were consumed by the fires which periodically broke out in Canton without showing adequate respect for the foreign factories. That their business was large can be concluded not only from the profits Cushing and his partners made but also from the fact that the American trade in Canton was very large and was enjoyed by only a few houses. The year Cushing went out to China, exports and imports in the American trade, registered in the customs house for Canton, each totaled over three million dollars. There was a great slump during the War of 1812, but thereafter the exports and imports shot up, passing ten and eight million, respectively, in 1819. The business of this year was not again equalled while Cushing was in Canton, but the trade continued to be large.[5]

To succeed in Canton was no easy matter. There was a maze of official regulations to be observed or circumvented and a most erratic government to satisfy.[6] There was competition on the part of the East India Company and other foreign traders. The actual trading was done through an association of native merchants, on whose members devolved the responsibility of seeing that the foreign devils in no way defrauded the Celestials.[7] This organization of the Hong merchants gave somewhat of a monopoly character to the trade. It took keen senses and some imagination to judge the quality of Chinese goods; the natives were especially clever at dressing up their poorer teas. As for the supply of Chinese goods, it was no easy matter to get information on which to estimate what the inscrutable Empire would bring to market. The supply and demand of the ships which came from the West were, moreover, hardly less

[4] To illustrate how this was done, in 1816 a Montreal house sent a cargo of furs in a Perkins ship to Canton. Cushing was instructed to sell these, charging 5% commission on sales, and to invest the proceeds without commission, one-third in teas, one-third in silks, and one-third in nankeens (cotton cloth). The return cargo was to be sold by the Perkins firm of Boston on a commission of 5%. They were also to receive one-fourth of net sales for freight.

[5] See Timothy Pitkin, *A Statistical View of the Commerce of the United States of America* (New Haven, 1835), p. 252, and H. B. Morse, *History of the East India Company Trading with China* (Cambridge, 1926), Vol. IV, appendix.

[6] This is one of the burdens of the tale told by Morse in his *History of the East India Company Trading with China.*

[7] They were called the security merchants, because each foreign trader had to have one of them guarantee that he would properly fulfill his obligations.

erratic in their changes than the winds which swept the China Sea.

Cushing lived through several major changes in the China trade. At first the fur trade of the Northwest Coast of America, later helped by sandalwood from the Pacific islands, was the mainstay of the Americans in China. In 1819 they began to carry considerable amounts of English woolens and cottons to Canton,[8] and they were already then catering to the Chinese taste for opium. The progress of the Industrial Revolution in the West gradually made it less profitable to send thither cottons from the Orient, and chinaware. Fortunately, however, this development was paralleled by an increase in the Occident's taste for tea and its desire for luxury goods from China.

The short-time fluctuations in western supply and demand in Canton were obviously difficult to forecast. Of course the foreign trader received instructions from home and advice from correspondents about prices, the movement of ships, and their cargoes. But market information six months old was hardly reliable. By this, however, the Canton merchant was guided in selling the western goods and purchasing a return cargo. If an incoming cargo found a poor market in Canton, it might be held for a rise. Or if some other eastern market seemed better, the ship was dispatched thither. If Chinese cottons, silks, and teas did not promise well in the West, the ship might be sent to Manila for hemp or rice, or to the Dutch Islands for coffee or spices. It might even be wise to send no cargo to the West. In that event there was still the problem of disposing of the ship's space and employing balances in the East or arranging the most profitable transfer home.

[8] See Pitkin, *op. cit.*, p. 251.

Indeed, Cushing was not only a wholesale buyer and seller of goods and a commission merchant. He bought and sold ships; he bought and sold the use of ships or ship space. He also stored goods. He dealt in insurance. And he was a banker, in that he traded in specie, in bills of exchange, and in credit, and kept accounts for his customers. In doing all this Cushing was, however, only performing the work commonly done by the international merchants of his time.

It is clear that only a man of excellent business judgment could survive in the Canton trade. Cushing is said to have become the wealthiest and the most highly respected merchant in Canton.[9] Those of his letters, diaries, and other papers which are extant give some explanation of his success; they reveal him as a most painstaking individual, one who took infinite care in handling the details of his business. Moreover, he was a first-class trader, and he was a good judge of the quality of goods. On this rested his reputation from the very first. Never had the Perkinses, in the words of Thomas Handasyd, been more pleased with a cargo or seen teas in such good order as Cushing sent home his first season. The young merchant's fame spread rapidly. Thorndike of Beverly immediately sent him a cargo on commission, and the merchants in Amsterdam thought he had taken "a leaf from the Dutchman's Book."

Cushing's life in Canton gives a picture of the general experience of American merchants there. Like the agents in the distant factories of the Hanseatic merchants in mediaeval Europe, the foreigners in Canton could not have wife and children with them because

[9] Samuel Morison, *Maritime History of Massachusetts* (Boston and New York, 1921), p. 66.

of the regulations of the Chinese Government. Cushing had his own factory, a place of business and residence, in the foreign quarter outside of the city wall. There he lived in comfort if not contentment. His immediate neighbors were some ten or so Americans[10] and a motley group of other foreigners. He entertained traders who came to Canton. It was decidedly a man's existence. It had variety enough of a kind, but it was the variety of a city of another race, of the coming and going of ships, of buying and selling, and of talk about business, which all merged into the endless routine of trade, year after year.

Canton made an indelible imprint on Cushing. That city was a remarkable place. It was one of the greatest markets of the world; and there one met most adventurous spirits and people of most diverse backgrounds. Moreover, Chinese Canton, itself, was a part of one of the richest cultures the world has ever known.

Cushing became acquainted with that culture. Some of the Hong merchants, whom he came to know well, were superior men. One, Puankhequa, was especially distinguished for his literary scholarship. He had a rare library. He entertained the foreigners at his beautiful estate up the river, where Chinese art and taste and gift for entertainment could be seen at their best. Puankhequa's place of business was a strange contrast to that which Cushing had known in Boston. A business conference with him might mean luncheon in his factory and some time spent in the striking garden attached thereto. There Puankhequa delighted in showing his guest rare birds, fish, and flowers, not to forget his American turtles.[11] Business was also leisure in Canton, a leisure touched with some of the finest elements of a splendid civilization.

Houqua, the Chinese merchant who has come to be such a striking figure in Chinese-American mercantile lore, was a special friend of Cushing. This venerable merchant was remarkable both for his character and wealth; he is said to have been worth $26,000,000 in 1834.[12] It is true that he aided and abetted the foreigners in smuggling opium into the Celestial Empire, but that is one of the contradictions one finds among the Hong merchants as well as among the good men from Boston who traded with them.

But Canton was not a desirable place for a foreigner to spend his whole life. Besides the impossibility of establishing a home in the foreign factory, there were ignorance, disease, and poverty to drive the foreigner away. Moreover, the climate was bad for an occidental. Nevertheless, Cushing became deeply attached to China, and he stayed there much longer than had at first been planned. But even he looked upon Canton only as a place to live until one could afford to retire.[13] Herein perhaps lies one key to the breakdown of the American China trade; when the Americans could make a good living at home they were no longer interested in the Orient. The immediate reason for Cushing's departure from Canton was apparently the fact that his health necessitated his seeking a better climate.

[10] Lists of merchants in Canton are given from time to time in Morse, *op. cit.*

[11] Bryant P. Tilden's Journal, which is in the Peabody Museum at Salem, gives an excellent picture of Puankhequa and Houqua and of the American merchants' contacts with Chinese life.

[12] Morse, *op. cit.*, Vol. V, p. 328.

[13] From here on through the remainder of Cushing's participation in trade, I have relied chiefly on the Cushing Papers and to a lesser extent on the Perkins Papers.

Cushing Retires from Trade

In 1828, Cushing returned to Boston. He came back home worth over $600,000, and, at the age of 41, still in the prime of his years. What should he do with his time and capital? Before Cushing had departed from Canton, Perkins & Company had been dissolved, and young Thomas Forbes, also a nephew of the Perkinses, had been left to close the affairs of the firm. The logical thing would have been for Cushing to continue in the China trade from Boston. This he considered. A reorganization was about to take place in the Boston Perkins firm, and T. H. Perkins wrote Cushing offering him "the *Head of our Hong*, from which the writer must soon retire *nolens volens*."[14] Cushing was at first willing to join his Boston partners, but only on condition that he be left free of all work, that the capital be strictly limited to one million contributed equally by the three partners, and that the activities of the firm be confined to the China trade. He proposed that the Canton end of the business should be in the hands of a new house (with a working capital of $200,000 furnished by himself at 5% a year) to be managed by Forbes in return for a quarter share of the profits.

Cushing planned, however, to continue in the China trade to a limited extent by taking occasional ventures with Perkins & Company and some old friends, Bryant, Sturgis & Company, leaving his interests in Canton in the hands of Forbes. He accordingly wrote voluminous letters to Forbes giving instructions about what to purchase for him. During 1829 Cushing joined Perkins and Cabot, and Bryant, Sturgis & Company, in sending three ships to China, in which he took a quarter share.

These ventures are characteristic of the way in which foreign trade was then carried on. Following the policy which merchants had adhered to for centuries, the Boston merchants did not risk all their wealth in one bottom or even risk owning all the goods in one ship. They distributed their risks by taking shares in several ventures. The bookkeeping and management were then carried on by one or another of the group. In this particular case, Bryant, Sturgis & Company were the bankers for the ventures; Cushing proceeded to England to supervise the buying of cargoes; and young Forbes was commissioned to be their agent in Canton.

Cushing decided to live in Europe. In the summer of 1829 he crossed to England with the immediate object of making purchases for the *Margaret Forbes* and the *Bashaw*, which were being sent *via* England to the East by himself, Perkins & Company, and Bryant, Sturgis, & Company. These boats were loaded in England with iron, English cloths, and opium. While in England, Cushing came to some important conclusions concerning the China trade. Since cotton and silks had come to be made cheaper in England and France than in China, teas would in the future have to be looked to as a return cargo to Europe and America. When tea exports were not excessive and Canton prices moderate, there was a chance of profit. Thus he records a revolution in trade. In view of the fact that the Orient is today experiencing a revolution in textile production which is supplanting western products in the East, it is interesting to reflect that a hundred years ago a similar change occurred in the West.

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[14] Perkins' Letterbooks, T. H. Perkins to Cushing, May 18, 1827.

In the fall Cushing sought a better climate in Europe. It is unlikely that he would have stopped there long, for he did "not care a pin" about the Continent, but his stay was interrupted by the news of the death of young Forbes in Canton. He promptly boarded the *Bashaw* for China. His expressed object in going was to manage the sales of the Canton-bound cargoes and look after his own and the Perkins firm's interests; moreover, he saw the possibility of making "a cool 100th [$100,000] by an expedition to France & Holland," and arranged with the English Barings and Amsterdam Hopes to send out two leased ships to carry back tea cargoes. But to his friend Sturgis he confided his homesickness for Canton and the fact that he did not care much for "being amongst the good people of this hemisphere" among whom "I feel as much a stranger now as I did when I first reached home."

After a voyage of over four months Cushing landed in Canton late in August, 1830. He remained there until March, 1831. During this time he succeeded in selling a portion of the European goods, though for much less than he had expected. He observed that there was too much competition from the West. He bought a considerable quantity of Chinese goods to be shipped to the United States for his own use and for gifts. In addition he made arrangements for his own interests in Canton and for the purchase of the tea cargoes to be sent to Europe. The price of cottons and silks in Canton confirmed his earlier conclusions that these could not compete with the western product at home.

After Cushing's return to Boston in 1831, he was determined to retire from business. As has already been seen, he at first planned to continue employing a part of his capital in trade by engaging in ventures with Perkins and Cabot, Bryant & Sturgis, and with Houqua, the Hong merchant. He continued to do this, largely under his own direction, for a few years. But this involved much risk and some trouble. Finding excellent opportunities for investing at home, he soon decided to withdraw his capital altogether from trade. This took several years, for goods moved slowly in the oriental trade. The rate of liquidation of Cushing's mercantile capital is shown in the following table:[15]

TABLE I. THE LOCATION OF CUSHING'S CAPITAL 1832–1842

Year	Invested in Foreign Trade	Invested at Home
1832	$454,500	$ 356,149
1833	266,210	670,658
1834	432,380	502,841
1835	267,501	682,828
1836	195,127	822,991
1837	124,283	946,452
1838	21,586	1,008,510
1839	6,800	1,067,429
1840	6,800	1,090,533
1841	6,800	1,113,960
1842	.....	1,117,692

A Country Gentleman

As Cushing withdrew from trade he also withdrew from active participation in business. Soon after his return from China in 1831 he had married Louisa Gardiner, a young daughter of the rector of Trinity Church in Boston.[16]

[15] Cushing's Account Book, Vol. II, January 1, 1832–January 1, 1842. The investment on January 1, 1832 is typical: a one-third share in the voyage of one ship; a one-fourth in five; and tortoise shells, silks, and teas on six other ships. The amounts are based on estimated values and do not correspond exactly with the figures given later in this article which were compiled from the Cushing-account ledger of Bryant, Sturgis & Company.

[16] L. V. Briggs, *History and Genealogy of the Cabot Family* (Boston, 1927), Vol. I, p. 384.

In 1834 they moved out from Boston to "Belmont," an estate in Watertown (now a part of Belmont, directly across from the Oakley Country Club). The Canton merchant thereupon settled down to lead the life of a country gentleman.

For the remaining 30 years of his life he lived off his income from capital, spending close to $50,000 a year.[17] His world became his estate, which he fashioned in accordance with the taste he had acquired on his stay in foreign countries. The mansion, built by an English architect, contained marble from Italy, mahogany from Africa, and other woods from the Orient. It was furnished with the best that Boston and Europe could offer and with delicate Eastern furnishings which gave it an atmosphere of oriental luxury.

Cushing seems never to have become an integral part of the Boston community. He rarely left his estate. He was a generous giver—indeed, he became known for his charity (though he preferred to give anonymously)—and his home was a hospitable one. But Cushing lived his life almost apart even from his own family. In 1836 he wrote a friend: "I have become quite a farmer & find it affords me both occupation & amusement." His diary, which meticulously records the events of each day, shows that his estate continued to be his chief amusement and occupation during the remainder of his life.[18] There are given the details of each day's work and comments which show that Cushing watched his fruit trees and flowers from season to season and year to year with the feeling of an artist and the interest of a scientist.

As a gentleman farmer Cushing drew heavily on foreign sources. He imported Chinese hogs and cows (which gave little milk but were "beautiful animals"), goats, fowl, peacocks, dogs, and the best cows obtainable in England. He loved fine horses. His specialties were, however, flowers, shrubs, and fruit and shade trees. He became quite a student of botany and of floriculture and arboriculture. For years he imported annually hundreds of rare plants, shrubs, and trees from Europe and the Orient.[19] Among the trees on his estate were copper beeches, gnarled old oaks, cypress, magnificent tulip trees, camperdown elms, and rare specimens of ginko from Japan.[20]

Cushing's estate was considered the finest around Boston, and his gardens and conservatories became known far and wide. At times the public was admitted to view them. Those gardens were not the first of their kind about Boston—the foreign merchants seemed to have had a special liking for trees and flowers. A study of the history of landscape gardening in New England might reveal, however, that Cushing's influence in promoting that interest was very real. But, unfortunately, practically nothing remains of the estate today. Only here and there among the hundreds of small residences which now cover what was Cushing's

[17] According to drawings in his account books.

[18] His many-volumed diary is in the Boston Athenaeum.

[19] Careful record was kept of these in his diary, where they were listed by name and number when acquired.

[20] Further information on this interest of Cushing may be found in A. J. Downing, *Treatise on the Theory and Practice of Landscape Gardening Adapted to North America* (New York, 1857), pp. 55–56, and Justin Winson (editor), *Memorial History of Boston*, Vol. IV (Boston, 1881), p. 633. Downing contains a picture of Cushing's mansion. Some of the trees on Cushing's estate had been planted by the former owner, another foreign merchant.

land does one see a tree which may have belonged to that earlier time.

Cushing illustrates not only the transfer of foreign capital but also the transfer of foreign culture to New England. He brought to Boston—which, according to his friend Sturgis, did not recognize a gentleman when it saw one and judged a man only by his wealth—not only wealth and luxurious commodities but also something of the taste and the way of living which he had come to know in the East. At the same time we see in Cushing the tragedy of the man who had lived long to himself in a strange country and returned home a misfit. There was little he could do but retire to his books and his blooming acres. Cushing died in 1862. A Boston newspaper characterized him as "one of the most unobtrusive and modest of men . . . and one of the most opulent and public-spirited citizens of Massachusetts."[21]

Cushing's Banker and Investment Agent

Through the thirty years after he retired from active participation in business, Cushing spent an average of almost $50,000 dollars a year. Yet his fortune, which was about $800,000 at the beginning of those years, tripled by the end of his life. For this record, Cushing's investment agent was probably chiefly responsible. It is impossible to go on with this study without turning aside to notice something of this extraordinary man and the situation which brought him into Cushing's affairs.

The liquidation of Cushing's mercantile capital brought him face to face with the problem of investing it. He, himself, knew practically nothing about investment opportunities at home. This was complicated by the mercurial state of American business, which was undergoing fundamental changes at the time. And there were no specialized investment agencies to whom Cushing could turn, for investment trusts, bankers, and managers had not yet appeared.

In this dilemma Cushing turned to his friend, William Sturgis. Like Cushing, Sturgis was also a foreign merchant. He had started in a Boston counting house at 16, had gone to sea at 18; and by the time he was 30 he had been captain, Indian diplomat, and trader in the Northwest Coast-China trade. But in 1810 he settled in Boston as an importing and wholesaling merchant, and in 1812 became a partner in Bryant & Sturgis, which became one of America's outstanding foreign mercantile concerns.[22] Bryant, Sturgis & Company continued in the China trade until in the late 1830's, importing mainly teas in the later years. The Opium War between England and China, 1840–42, put a stop to their trade, and in 1841 the firm was dissolved.

The career of Bryant Sturgis gives an interesting contrast to that of Cushing. These men had remained at home, and they had, therefore, been able to follow closely developments in American business. Indeed, like Perkins and other American merchants, they began early to invest a small part of their profits in developments in their own community. By the early 1820's they were interested in bank stock, and within a few years they were buying stock in insurance and manufacturing companies to be held jointly for the partners. This coincided with

[21] *Boston Daily Evening Transcript*, April 14, 1862.

[22] The source of the information about Sturgis is the Bryant & Sturgis Papers, Baker Library, Harvard University. These consist of letter books and account books covering most of the years of the firm's existence.

the breaking down of the Northwest-Coast trade and the rise of corporations at home.

The history of Bryant & Sturgis illustrates the change of the sedentary merchant into a specialist. While they were still merchants, they became in a very real sense a private investment house, and when they retired from trade they formed a new partnership for the investment of their capital. They illustrate one of the main sources of our modern investment banking, a very large proportion of which had its origin in mercantile business. Except for themselves, however, the only persons for whom they acted were Cushing and a few relatives. Their purchases were made directly or through brokers, in New York mainly through Prime, Ward & King.

Bryant & Sturgis were Cushing's bankers from the time of the latter's return from China in 1828 until shortly before his death.[23] They held his uninvested balances on which they paid him interest. The account at the end of the successive years shows that balances ran into hundreds of thousands of dollars up to 1841, after which they were relatively small. Bryant & Sturgis paid Cushing's bills from these balances. More important, they seem to have managed his investments. All the evidence which is available indicates that William Sturgis was chiefly responsible for Cushing's investments. He had the power of attorney to transact business for Cushing, and he generally purchased for him of the same stocks which he purchased for himself. Only once does Cushing mention in his diary that he suggested to Sturgis the purchase of certain stocks. A few times during the year Sturgis called on Cushing to talk over business. At the end of each year Cushing received a report from Sturgis which he promptly copied, signed, and returned. Bryant & Sturgis received for their work a commission of 2½% on annual income.

All our information goes to show that William Sturgis was a man of unusual business ability. He had rare judgment of the value of different investments, and he kept his poise remarkably well in the face of the speculative waves that periodically swept the country. His business principles were conservative. As a merchant he did not like to depend heavily on credit, and he believed in a quick turnover with low profits. As a railroad director he believed in staying out of debt and paying dividends only out of earnings; surplus earnings should be used in improving the road and reducing rates to stave off competition.

The Investment of Cushing's Capital

Fortunately it is possible to reconstruct something of the process whereby Cushing's capital was made to multiply itself. The Bryant & Sturgis journals and letter books for a large portion of those years, their Cushing ledgers for 1836–1861,[24] and annual summaries of Cushing's accounts are in Baker Library, Harvard University. From these it is possible to see how Cushing's capital was turned from trade into the expanding business life within the United States, and to watch the growth of his fortune.[25]

[23] According to the Bryant & Sturgis letter book and Cushing's account with them, this relation ended on July 1, 1862. J. M. Forbes was their successor.

[24] The first ledger is lost.

[25] For the remainder of this article I have drawn heavily from a careful analysis of the Cushing ledgers, 1836–1851, made by Mr. William T. Baxter with the assistance of Miss Frances Carpenter. Mr. Baxter is a chartered accountant of Edinburgh and was formerly Commonwealth Fellow in the Department of Business History, Graduate School of Business Administration, Harvard University.

Cushings' investments seem to have been distributed in line with certain general principles. These were: (1) investment in concerns with which Sturgis was personally acquainted; (2) investment with a view to getting earnings rather than speculative profits; and (3) wide diversification.

One striking characteristic of the investments was that they were largely limited to Boston and its immediate hinterland. Loans on notes to individuals or companies were almost exclusively local. A few loans were made to individuals out West, but they were apparently natives of Boston. Real-estate investments were also local. Securities were, however, slightly more scattered. The first investment made outside of New England was the purchase of 200 shares of the Atlantic Insurance Company of New York, 1832. These and shares of another New York insurance company were sold before the middle 'forties. From time to time a total of 700 shares of the second Bank of the United States was purchased, but these were sold in 1839. In that year were bought 700 shares in the Bank of Commerce, of New York, an institution of more than local importance. The year 1839 also saw the first purchase of railroad stock outside of New England. Shortly thereafter an interest was acquired in several short roads in the Mohawk Valley; in 1845, shares in one New Jersey and two Ohio railroads; in 1846, in several Pennsylvania coal roads; in 1851, in the Philadelphia, Wilmington, & Baltimore; in 1853, the Michigan Central; and late in the 1850's, in the Chicago, Burlington & Quincy. The only non-New England government bonds purchased were New Orleans city bonds acquired in 1845 and federal loans of the Civil War.

The investments outside of New England constituted a very small portion of the total. Emphasis on New England was in some measure due to the fact that the investment market in the United States was, certainly until the 'fifties, largely local. Sturgis could and did purchase securities through New York brokers. But he apparently chose to deal principally with individuals or firms personally known to him or in whose development he had taken a part. Indeed, it was hardly necessary to go outside of New England, as that section of the country was then one of the chief investment fields in the United States.

A second striking characteristic of Cushing's investments is the almost complete indifference they show to speculation. The three outstanding fields of speculation in the United States in those decades are noticeable because of their absence: canals, western state and municipal bonds, and western lands.[26] Indeed, investments in the West were avoided almost entirely. There is, moreover, no evidence of buying and selling securities for the purpose of taking sepculative profits. Cushing's investments at his death were, with few exceptions, the sum total of purchases made from year to year. The exceptions were apparently sold because they were not worth holding. On some of them considerable losses were taken. The most striking illustration is the stock of the second Bank of the United States, which was acquired between 1833 and 1837. This was presumably purchased on Nicholas Biddle's successful record as a commercial banker and before he had come to stand as a sponsor of

[26] Two local canal projects and the New Orleans bonds were the only exceptions, and they stand on their merits.

questionable internal improvements and as a manipulator of the English cotton market. It is to the credit of Sturgis that he sold these shares at $71,435.97, which meant a loss of but $11,607.31, only a short time before their market value collapsed.

A third characteristic of these investments was extensive diversification. This is indicated by Table II.

Real estate was relatively unimportant in Cushing's investments; it consisted principally of his home estate. A large part of the capital was always in

TABLE II. CUSHING'S INVESTMENTS IN THE UNITED STATES, 1835–1851[1]

Year	Cash Balances	Notes and Personal Loans	Bonds		Insurance Stocks	Bank Stocks	Manufacturing Stocks	Railroad Stocks	Real Estate	Total
			Gov't	R. R.						
1835	$318,876	$167,636	.....	.....	$36,990	$ 41,003	$149,204	$ 33,712	$ 37,734	$ 785,158
1836	182,125	193,636	.....	.....	65,202	115,452	181,654	47,309	90,913	876,295
1837	181,139	251,636	.....	.....	79,744	139,152	216,404	50,309	90,913	1,009,299
1838	192,515	256,431	.....	.....	89,958	139,152	233,417	54,854	90,913	1,053,243
1839	169,298	268,217	.....	.....	85,958	81,979	242,467	127,866	90,913	1,066,702
1840	167,909	209,283	.....	.....	89,558	139,711	244,467	152,184	90,913	1,094,030
1841	76,298	303,353	.....	.....	77,284	139,711	266,467	193,941	90,913	1,147,970
1842	96,149	303,353	$ 4,720	.....	69,034	139,711	271,467	205,254	90,913	1,180,604
1843	9,258	284,377	24,953	.....	51,034	143,751	280,267	232,897	91,638	1,118,180
1844	13,243	342,902	24,953	.....	39,116	138,701	284,567	238,638	82,647	1,164,771
1845	6,538	341,220	44,953	.....	36,616	149,701	340,970	239,435	82,647	1,242,084
1846	9,876	335,273	44,953	.....	35,146	149,701	367,470	278,107	82,647	1,303,177
1847	5,738	301,500	44,953	.....	46,905	149,701	397,720	321,593	82,647	1,350,760
1848	4,691	319,500	23,240	.....	49,009	149,701	417,720	350,339	82,647	1,396,850
1849	10,094	320,000	24,920	$42,450	49,009	149,701	443,544	324,789	82,647	1,456,157
1850	3,778	390,750	24,920	25,000	58,608	149,701	443,544	363,074	82,647	1,542,025
1851	8,372	306,550	44,920	30,684	58,608	149,701	427,169	392,023	156,899	1,574,930

[1] The figures are taken from annual balances for December 31 compiled under the direction of Mr. William Baxter from the original Cushing account ledger of Bryant & Sturgis. The stock and real estate values are given at cost.

Cushing's investments were, therefore, apparently made with a view to securing income from earnings. Stocks and bonds were purchased in concerns which were meeting a developed need—railroads in unquestioned paths of commerce, industrials of good promise, and banks and insurance companies on a sound earning basis. It is interesting to note that, of the companies whose securities Cushing held at the time of his death, 4 out of the 6 banks are still existing, as are also about 20 of the 26 New England manufacturing concerns, and almost all the railroads. The banks and railroads have been merged with others, but most of the textile factories stand under their old names.

cash balances and loans to individuals and companies on notes. These loans were generally made to run for several years, not infrequently as many as seven. Judging by the names of the borrowers, these funds may have gone extensively into mercantile enterprises. A considerable amount went to manufacturing concerns, particularly in the later years. The relatively small amount of bonds simply reflects the fact that such borrowing by corporations was not at the time well developed. Common stocks occupied the most important place. As far as I have been able to ascertain, no preferred stocks appear on the list. The growing importance of railroad and

manufacturing stocks (chiefly New England textiles), relative to others, was in keeping with the changing character of New England economic life in those decades.

Within each group there was also considerable distribution. In 1835, the loans to 9 individuals averaged $22,905; and shares in 3 banks, $13,668; in 6 insurance companies, $5,248; and in 10 manufacturing concerns, $10,636. In 1859, the last year entered in Cushing's summary account books, loans to 33 individuals and companies averaged $16,242; bonds of 11 concerns, mostly railroads, averaged $24,179; shares of 6 banks, $35,125; of 8 insurance companies, $7,326; of 16 manufactories, $24,364; and 16 railroads, $34,950.

The Earnings of Cushing's Investments

The test of an investment lies finally in the income it brings and its long-run value. Among the Cushing Papers is an account book in Cushing's own hand which contains what is apparently a copy of Bryant & Sturgis' annual statement of his investments and income, and calculations made therefrom. These record the average income from the property for the years 1833–58 as 7.282%. This was, of course, outside of the estate and personal property which brought no money

TABLE III. PERCENTAGE YIELDS FROM THE VARIOUS CLASSES OF CUSHING'S INVESTMENTS

Year	Fixed Interest Investments				Equities						Grand Total
					Common Stocks				Real Estate	Total	
	Notes	Gov't Bonds	R. R. Bonds	Total	Bank	Mfg.	R. R. & Canals	Ins.			
1836	5.5	.....	.....	5.5	4.1	10.9	15.1	15.2	3.0	9.3	7.3
1837	5.3	.....	.....	5.3	6.3	4.4	1.3	9.8	5.1	5.6	5.4
1838	4.8	.....	.....	4.8	6.5	9.2	4.5	8.5	6.3	7.6	6.4
1839	5.3	.....	.....	5.3	8.4	10.9	4.5	7.1	5.5	8.2	7.0
1840	6.3	.....	.....	6.3	5.1	4.6	6.9	9.4	7.1	6.1	6.2
1841	7.0	.....	.....	7.0	6.7	8.7	8.3	14.2	5.2	8.4	8.0
1842	4.7	.....	.....	4.7	6.2	3.0	8.7	19.5	5.9	7.0	6.2
1843	5.2	9.7	.....	5.4	5.9	6.9	7.7	16.5	6.5	7.6	6.9
1844	4.4	5.8	.....	4.5	5.7	15.2	7.5	13.3	4.2	9.9	8.3
1845	6.4	5.4	5.1	6.3	6.0	16.2	10.2	14.5	6.6	11.6	9.8
1846	5.3	6.8	6.1	5.5	6.5	11.9	10.8	6.1	6.7	9.9	8.4
1847	5.8	3.2	5.2	5.4	6.8	7.5	8.9	9.5	6.6	7.8	7.1
1848	5.7	14.8	5.5	6.4	7.4	4.7	10.4	9.6	6.4	7.2	7.0
1849	5.9	7.8	6.8	6.0	7.9	6.3	8.2	9.1	6.3	7.2	6.9
1850	5.6	3.5	6.9	5.5	7.8	5.8	15.0	17.6	6.0	9.7	8.5
1851	6.0	*	6.5	5.6	7.9	3.5	8.6	13.6	7.7	6.7	6.4
Average...	5.6	6.3	6.0	5.6	6.6	8.1	8.5	12.1	5.9	8.1	7.2

* The arrears for 1851 were repaid in 1852, and so the average should be higher. The figures for this table were obtained by finding the relation of income to capital for each class of investment. Owing to the fact that during many of the years the holdings were varied, an artificial figure (the average of the book values at the beginning and end of the year) was used as the cost of the capital invested; the results cannot, therefore, be regarded as absolutely accurate, but they will serve to show the general trends.

returns. A more realistic picture is gained, however, from a statement of the annual yield of the different types of assets. Table III gives such a statement compiled from the individual items of income given in the Cushing account ledgers kept by Bryant & Sturgis for the years 1836–1851. This table is noteworthy in that it gives precise and detailed information concerning a subject about which we know very little except in a general way.

A large portion of the annual income was withdrawn for expenses. The annual expense of the account, consisting of the commission of Bryant & Sturgis, postage, and so on, ranged from $1,000 in the earlier years to about $3,000 as the capital neared its maximum. Cushing's personal drawings for living expenses, the purchase of books, trees, and furniture, averaged, over the years 1836–51, $46,949, and was slightly higher in the succeeding years. In 1843, over $100,000 was withdrawn for Cushing's new house.

Table IV summarizes the inventory of Cushing's estate as appraised shortly after his death in 1862. The total is about three times the capital as of January 1, 1832, which was then valued at $810,649.

TABLE IV. INVENTORY OF CUSHING'S ESTATE AS OF JULY 26, 1862

	Fixed Interest Securities	Stocks and Real Estate	Total
Notes and personal loans	$ 669,213.32*		$ 669,213.32
Securities			
Banks		$ 204,260.00	
Manufacturing		305,210.00	
Railroads	$ 343,785.00	423,831.00	
Insurance		67,520.00	
Government bonds	109,522.00		
	$ 453,307.00	$1,000,821.00	1,454,128.00
Real Estate		$ 176,600.00	176,600.00
	$1,122,520.32	$1,177,421.00	$2,299,941.32
Private estates, *etc.*, valued at		$ 109,000.00	
Furniture, *etc.*		27,000.00	
			$ 136,000.00
Grand total			$2,435,941.32

* This includes a small cash balance.

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A SURVEY OF ECONOMIC PLANNING

By P. W. CONRAD

Developments Pointing toward Planned Economy

IT can be fairly stated at the outset that there is nothing newfangled about the idea of a planned control of the nation's economic life. On the contrary, developments since the beginning of the industrial revolution pointed steadily and unmistakably toward some such eventual outcome. A hundred and fifty years ago we thought in terms of single machines. The problem was simply to make each machine efficient. Fifty years ago the scope had already enormously increased. We were no longer concerned with the efficiency of the individual piece of machinery, but rather of whole groups of machines in relation to each other. The factory itself was being thought of as a single functioning unit. Each device and process in the plant must be in mesh and attuned to each of the others like the moving parts of a smoothly running engine. Raw materials flowed in at one end, and the finished product emerged at the other. This was the ideal and accomplishment of "scientific management," so-called.

Nor did matters stop here. From grouping machines in a factory and treating the factory as a unit it was but a step to grouping factories themselves into various corporate organizations and thinking and planning in terms of this yet larger corporation as a unit.

Well before the beginning of the present century this latter step was already a commonplace, and yet an-

other expansion in scale seemed imminent. Clearly there was no reason why all of the corporations in a given industry should not in turn be grouped, and the entire industry planned and administered like a single functioning machine.

On the basis of this steady expansion in the scope of planning and control, no unduly vivid imagination was needed to foresee a day when the nation's industries themselves would be ordered in efficient relation to each other and the entire national economy planned and controlled as had previously been done for smaller units. The whole line of industrial march pointed straight toward precisely that situation.

But when it came to treating whole industries as a unit, a hitch occurred. The nation, rightly or wrongly, began to distrust such concentration of control in a few hands. The threat of evil seemed to many people greater than did the promise of good. Antitrust legislation halted the march of expansion in scale or, where it failed to halt it, at least drove it into underground and devious channels. We cast our vote for competition among several units in each industry, rather than their combination into a single great organization. And for more than forty years our industrial life thrashed out its problems on the basis of that decision.

For some forty years economic affairs moved on the whole so satisfactorily that we forgot we had voted, and a generation arose that was unaware that such a question had ever been raised.

It was at this point that the matter stood in 1929. It stands substantially at this point today. But in the intervening four years the planners have moved the previous question. We have been reminded of that old vote. In essence the proposals for planned national economy are simply proposals that we resume the previous line of march where we deliberately broke it off many years ago. We are asked to consider the possibility that when we thought we were voting for *laissez faire*—for a policy of "hands off natural developments"—we were actually indulging in unwarranted and unwise interference with the natural progress of events. Possibly, they suggest, we undertook to dam a bigger and more inexorable river than we realized. Is it not conceivable that during all those forty years of seeming well-being, the waters were in fact piling up silently behind the obstruction, and that 1929 merely marked a final accumulation of pressure that swept the dam away?

Approached in this way, planning loses any dubious glitter of novelty. It must be dealt with not as a sudden and revolutionary notion, but as one more step in a well-defined and persistent evolutionary trend. The suddenness lay not in the thing. It was we who suddenly became aware again of the issue we complacently assumed we had disposed of once for all. To be sure, many of those who have recently been loudest in urging it upon us have themselves only recently become convinced of the necessity of economic planning. But there are others who have held that view for some years. During the past decade a small but increasing group of economic thinkers has been quietly building up a body of facts and hypotheses all pointing in the same direction—a direction diametrically opposite to the one in which events seemed to be moving. In the light of those facts it seemed to these economists that we were moving toward trouble. But so long as events moved smoothly their observa-

tions went largely unheeded. Only after trouble had developed on the grand scale did they begin to gain an attentive hearing, and a sudden multitude of new disciples.

Since the facts and interpretations built up by that group served as a nucleus around which have crystallized nearly all the new planning proposals, it may be well to indicate briefly what those beliefs are, and on what they are based.

Demand for Redistribution of Income

The core of their position is a demand for the redistribution of wealth. This in itself is nothing new, of course. Political minorities have been urging the same thing for years, but their arguments for it have been largely social or sentimental. This new economic group approaches it, on the contrary, as a matter not of sentiment but of stern necessity—of sheer self-preservation. The capitalist economic system has admittedly developed an unparalleled capacity to produce goods. But in so doing it has, they point out, developed a vital weakness in another direction. It has failed to realize that the mere capacity to produce is useless unless accompanied by an equal capacity, on the part of the ultimate consumers, to purchase the goods and consume them. Any economic system, to be in balance, must provide both goods and the ability to buy them. This balance is the condition of prosperity. The present crisis, in their opinion, is caused by the increasing failure of the capitalist system to provide the public power to purchase the goods it produces in increasing profusion. This new emphasis on the second element in the scheme of balance has resulted in the group being referred to as the "purchasing-power school." In their view wealth exists only as purchasing power. It is, in other words, not static but dynamic. It is only actual if it is actually used to buy goods for consumption in the satisfaction of human needs and desires. Their redistribution of wealth is really a redistribution of income or purchasing power. Without some such deliberate restoring of balance it is only a matter of time until the present system will throw itself so completely off center that there will be no possibility of righting it. The whole mechanism will crack up under the strain.

In support of this contention there is marshalled a formidable array of evidence in the form of certain sharply defined trends observable within the economic structure over the past several decades. In particular they stress the steady and startling increase in savings, the rise of the long-term debt in proportion to income, the rapid mechanization of industry with consequent diminution of the part played by labor as a factor in production, and the increasingly narrow concentration of wealth and purchasing power in the hands of a smaller and smaller percentage of the population.

A moment's consideration shows how directly each of these tendencies would operate to diminish the effective purchasing power in the hands of consumers. Savings, whether in the form of bank deposits, insurance, long-term bonds, or stocks, represent in the main money withdrawn from current consumption and fixed in the form of new productive plant capacity. The displacement of laborers by machinery is simply another aspect of the same process whereby less and less goes into the laborer's pocket to be spent at once for consumption goods, and more and more is paid out as dividends or interest,

with the strong presumption that much of it will be reinvested in yet more plant and equipment rather than currently spent to buy the output of existing plants. For it seems reasonably clear that if a hundred laborers each get a thousand dollars a year, far more of it will be spent for consumption goods than if the whole $100,000 were paid out as dividends to a single, already wealthy individual. The individual's capacity to consume goods currently is relatively limited. Above that limit he has no choice save to reinvest in new plant to add to the already existing overcapacity and thus destroy still further the balance between production and consumption.

It is this that constitutes the danger these economists see in the increasing maldistribution of income and purchasing power, by concentration in fewer and fewer hands. The present crisis represents simply the culmination of trends which have been visible but largely unnoticed for a long time. But because all these effects have been cumulative and result from evils which grow in magnitude the longer they go on, this crisis is not merely worse in degree than previous ones—it is an entirely different kind of crisis. It is a culmination, an approach to the breaking-point for the whole system. Therein—so runs the argument—lies the necessity for deliberately stepping in with planned controls for rectifying these tendencies. The present system, they point out, has given unmistakable warning that if allowed to function any longer, unregulated, it will destroy itself and us with it.

Not all the adherents of the purchasing-power doctrine agree fully as to the details of the argument as thus briefly stated, of course. They differ in emphasis on the various factors involved and in the degree of urgency they see in the situation. But the above statement may be regarded as a fair composite photograph, so to speak, of the economic analysis and point of view from which the bulk of present planning proposals stem. It would warrant close attention on that ground alone. But an even greater and very practical importance has attached to it during recent months as it became evident that the Roosevelt Administration was basing its recovery measures almost entirely upon this same interpretation of our economic ills. We find ourselves, in brief, faced no longer by an hypothesis, but by its translation into nation-wide activity of a concrete nature backed by the immense resources and prestige of the Federal Government, and calculated to affect vitally every one of us.

Nor is this purely a temporary emergency development. The immediate activity of the NRA, AAA and other divisions, may be regarded as essentially transient measures aimed simply to stimulate recovery from this depression. But beyond this short-term effort the Administration is pledged further to attempt permanent regulation and stabilization of industry. The longer-term objective may be found to demand different measures, but we can reasonably assume that the philosophy behind it will be much the same.

Weakness of Purchasing-power Theory

Since, therefore, there is every indication that whatever definite steps toward economic planning are taken in the near future will be dictated in considerable degree by this particular doctrine, it may be well to note briefly the points of possible weakness that

have been raised against the purchasing-power theory.

It rests, as we have observed, on rising trends in savings, debt, mechanization of industry with resultant technological unemployment, and concentration of great wealth in few hands—all tending to diminish buying of consumption goods. There is strong evidence of the existence of these trends, but there also exists considerable question as to precisely how fast they have been rising, and therefore whether so much importance should be attached to them as this group asserts. The data on most of these points are far from complete, often discontinuous, and in no case amount to positive proof. Thus, the cumulative total of savings has increased steadily, but it is doubtful whether the percentage of yearly income that is being saved has risen also. Moreover, many authorities claim that savings, even when devoted to plant construction, eventually find their way into consumption spending. The same may be claimed, in part at least, for annual interest charges on debt, which, while definitely rising, do not appear yet to constitute any unbearable burden. The tendency of machines to displace labor, while marked in certain production industries, has scarcely touched others, and there is good evidence that most of the workers so displaced have been quickly absorbed into other trades, notably the services of distribution. As to the concentration of wealth, it is demonstrably very great; in 1929 the wealthiest 2% of the population were getting over 20% of the total national income. But there exist no figures to prove conclusively how fast this is changing, or whether in fact it has changed at all in the past 30 years.

This absence of proof as to the magnitude and speed of these trends should not be taken as discrediting the purchasing-power doctrine. But it does counsel caution against its too full and immediate acceptance as an established fact. It raises reasonable doubt as to how far we are justified in declaring that the sapping away of purchasing power through the channels named is the sole, or even the major, cause of our troubles, and that only quick action to correct these tendencies will prevent swift and complete collapse of the system. Severe as this depression is, we may well hesitate to brand it as signalling the breakdown of capitalist economy when we realize that a similar belief has made its appearance during substantially every depression during the last hundred years. Each has also seemed different, cataclysmic, and final to those who were experiencing it. Each has seemed to signal the immediate breakdown of the system. Even the detailed arguments have a startlingly reminiscent air when we note that fifty years ago economists in England were denouncing the industrial system, free competition, anarchy of overproduction and uncontrolled technological change. They declared that unless the state intervened civilization would perish, and proposed that prices be restored by inflating the currency, that production be controlled by law, work spread by limiting hours, and that the government redistribute wealth and income! Time and again we have proved ourselves utterly unable to see how the system could recover, without drastic revision, or to imagine it developing or expanding in the future. Yet obviously it has each time not only recovered but gone on to better its performance a hundred fold. The record seems to justify a lively scepticism when today we hear the familiar old

jeremiads voiced again in the contemporary valley.

But although the history of depressions seems to warrant this scepticism, and although it has become our national habit (except in depressions) to assume unquestioningly that it is our national destiny to go on expanding forever through greater and greater cycles of material prosperity, this comfortable optimism is today perhaps less justified and more perilous than ever before. The mere fact that an individual has recovered from two attacks of pneumonia scarcely proves that he might not die of a third and even more violent one. That these periodic swings from prosperity to paralysis are in fact becoming steadily more violent is no longer open to question. It is equally certain that there exists a definite limit to the ability of the social and political structure to endure such violent changes without cracking. Given these circumstances, the plainest common sense tells us that mere optimism will not forever save us.

Unfortunately common sense is, however, of but little help in telling us what will save us. Until we know precisely what is happening to us and why, we cannot hope to work out effective means of salvation. For that there is needed a more intimate and authoritative understanding of the working of the economic system than even our most assiduous economists seem yet to have acquired. There have been theories a plenty. Of these the purchasing-power group has appeared to come closest to providing an intelligible explanation of the trouble and the most persuasive suggestions for remedy. But even in this theory we have noted some distinct weaknesses. The results of present governmental experiments along that line will at least provide us with increasingly adequate bases for judgment.

Our National Economy—a System and Not a Jumble

But in the meantime there has appeared from quite a different quarter, a far more complete and convincing picture of the workings of the capitalistic system than any of the economists have succeeded in giving us. Mr. Bassett Jones' recently published study of the operating characteristics of our national economic machine is a performance of a new order.[1] Although working quite independently of the purchasing-power group, and with a methodology vastly different, his findings support theirs in such important respects and throw light on so many of their points of greatest weakness that it will be useful to summarize briefly his results.

The work is characterized by a precision and objectivity new in the field of economics. Mr. Jones, an engineer and mathematician, not an economist, has charted the operating characteristics of our economic system for the past 130 years, exactly as any engineer might record the performance of a machine. He reduced to graphic curves the best statistical data available as to capital claims on investment, physical output of individual industries, and total physical output of the system. Mathematical analysis of these curves revealed definite and significant relationships between them. The economic system over this period conformed with surprising precision to definite growth patterns. Over-all expansion proceeded at an accelerating rate up to 1911, thereafter at a declining rate. That

[1] *Debt and Production.* New York: John Day Co., 1933.

year marked the turning point in the development of the capitalistic system. (Mr. Jones points out that the early rate of growth could not possibly have been long maintained physically.) The curves indicate a virtually complete cessation of growth for the system as a whole by around 1950. Significantly enough this coincides closely with the date when population curves forecast for this country a virtually stationary population. The tendency of long-term profits to coincide closely, percentage-wise, with the long-term rate of population growth has been observed before.

This study further reveals that up to 1911 capital claims upon physical output increased constantly at the same rate that physical output was growing. Whenever this one-to-one relationship was exceeded, a depression followed, with the effect of scaling down capital claims to the one-to-one ratio again.

But when in 1911 capital claims began once more to outstrip rate of increase in output, no corresponding correction took place. For eighteen years the spread continued to widen. Not until 1929 did the scaling-down process set in. By that time capital investment was nearly six times as great as it should have been according to the norm. Mr. Jones attributes this to two causes. Enormous reserves had been accumulated within the system out of which capital claims could be met for a time, when output proved insufficient. Also an enormous expansion of credit took place, enabling us to seem, at least, to meet capital claims by borrowing against future output. By 1929 this illusory recourse to burning its own smoke, so to speak, had been exhausted by the system. The scaling-down to actuality then became inevitable. It was bound to be unprecedentedly severe because of the abnormal degree to which the ratio had meanwhile become distorted.

The importance of all this from the point of view of economic planning scarcely needs to be pointed out. It indicates beyond reasonable doubt that our national economy is in truth a system, essentially orderly in its structure, and not, as we had begun to fear, merely a jumble of accidental and unrelated phenomena. With this assurance we can be confident of our eventual ability to grasp the essential relationships and establish controls to ensure a smooth performance in the future, according to its own internal laws of functioning. Its past periodic breakdowns have resulted not from imperfection in the system, but from our own ignorant and unthinking attempts to force from it a type of performance for which it is unsuited.

The close kinship of these conclusions specifically with those of the purchasing-power group is equally clear. Each attributes our current troubles to disproportionate piling up of capital investment and capital claims, as against consumption claims. Each attributes to the present crisis a different order of magnitude and significance than previous ones. Both conclude that deliberate control to prevent recurrences of such distortion is both imperative and feasible. The great value of Mr. Jones' contribution lies in the superior anatomical conclusiveness with which he has been able to invest his demonstration.

Modes of Attack against Present Crisis

Armed with the new criteria supplied us by this engineer-economist we may now profitably return to consider in their light the different modes of procedure recommended by the various advocates of economic planning.

These proposed modes of attack fall into three main groups—financial, industrial, and functional. The first believes that recovery and stabilization can be effected purely by manipulation of currency and credit. The second, in which the purchasing-power group is dominant, holds that financial means will not suffice unless there is in addition a definite government supervision over industrial processes themselves. The functional, or engineering, attack differs from the other two in the extreme degree to which it believes the existing system must be remodeled if planned controls are to function successfully.

It is obvious that present recovery measures of the Administration are an attempt to combine the first two lines of attack. On the financial side excessive capital claims are to be scaled down by manipulating the gold content of the dollar. On the industrial side the regulation of unfair competition aims, by widening the profit margin, to permit payment of higher wages. Both measures are directed to restoring the buying power of consumers. They are supplemented by a program of federal spending on construction projects and by a system of taxes which siphon wealth from those with high incomes to those whose incomes have diminished or disappeared. From the point of view of Mr. Jones' analysis these would be considered steps in the right direction, so far as they go. But they would probably not be considered as going far enough. In fact, in this matter of how radical the controls must be in order to operate successfully, Mr. Jones undoubtedly stands far closer to the engineering than to the other two groups.

The strictly functional economy advocated by the third group or engineers, is, in effect, the ultimate and extreme condition toward which all planning proposals tend to move in more or less moderate degree. To the engineering mind our present economic system with its *laissez faire*, hit-or-miss, trial-and-error procedure is inefficient and wasteful to the point of utter absurdity. Instead of moving smoothly forward with its work, it advances by clumsy lunges. Production and distribution processes which are intimately dependent on each other for smooth functioning are set up without reference to each other and administered as independently as though they were on separate planets. The whole is supposed to be regulated by a financial mechanism which, however, bears no ascertainable relation to the physical processes it pretends to regulate. To them the surprising thing is not that this heterogeneous contraption breaks down, but rather that it has ever succeeded in working at all.

It was the engineering mind that produced the steady advance to control of larger and larger units which, as we have seen, characterized the progress of the industrial revolution up to some forty years ago. Naturally, therefore, it is the engineers who today advocate most strongly the most radical steps toward the resumption of that progress. Control, to an engineer, is no control at all unless it is complete. To them, therefore, the only reasonable move seems an immediate recourse to planned economy in its fullest sense, and on a nation-wide scale.

Need for Centralized Control

The project involves an absolute centralized control in the hands of technicians. Production and distribution of goods would be planned and administered as for a single enormous factory, with the standard of living

limited only by the technical efficiency of the process, and technical advance in turn adjusted to the maximum rate of speed which the social structure could absorb. This emphasis on functional efficiency would result in each betterment being passed on immediately to the whole population rather than, as at present, diverted to the economic and social advantage of a favored few.

The problem of maintaining purchasing power would be handled by keying the money to buy goods directly to the process which produced them. Production, in other words, would generate its own purchasing power in precisely the quantities needed to absorb the goods produced.

The picture of so orderly a state of affairs has unquestionable charm. Undoubtedly also it is toward some such condition that the long-range tide of events is moving us. Industrialism means increasing complexity and interdependence of people and of processes. That in turn necessitates an ever-increasing degree of control over each of the factors which thus increasingly affect our lives at every point. But even if we did not have so freshly before us the spectacle of the flies which Soviet Russia has been undeniably finding in a similar ointment, we should know instinctively that this proposal represents a more drastic change than men will undertake suddenly unless pressure of events leaves them no alternative.

As yet no such pressure has developed in this country. Harsh as the depression has been, and violently as it has shaken our minds from many of their old assurances, the nation is yet in no mood to rush to ultimate steps until we have exhausted the possibilities offered by adjustments of a more moderate nature. Within the planning area we are already committed to experimental changes which four years ago we would have regarded as wildly radical. Time and events have altered our perspective. They will undoubtedly continue to do so. But our adoption of planned controls will, so far as our wishes are consulted, continue to be a gradual affair, an advance pushed forward by cautious installments and within the existing social and economic framework, rather than by a wholesale sweeping away of the old order to make place for a completely new scheme of things. Whole nations cannot readily or swiftly be schooled in new ways of thinking and doing.

Decline in Expansion of Capitalist System

But though the pressures which are forcing us forward into this area of national economic planning do not yet seem to demand a revolutionary pace, we would do well not to underestimate them. The capitalist system is not dead, but it has definitely entered a new phase, and its conduct already begins to be radically different from what we have known. We do not know exactly how much longer we have before expansion in this system will have completely ceased, but we know it is ceasing. And we have every reason to believe that the rate at which this slowing down occurs will prove of critical importance to us, for that rate will in turn almost certainly dictate the rate at which we will be forced to move toward a fully planned economy. It will do this by gradually weakening the mainspring of capitalist enterprise—the profit motive. We have only recently begun to suspect how completely capitalism has depended, for its success, upon continuous over-all expansion of the system. Mention has

already been made here of the significant correlation, within the system, between rates of increase in population, physical output, and profits. This correlation is too close to be accidental. The work of Mr. Jones indicates this with a completeness amounting to proof. Consequently, with population and output curves tapering off to a zero rate of growth, we have good reason to expect that profits for the system as a whole will also tend to disappear. They have been, in other words, purely a function of expansion of the system. When the expansion ceases, the phenomenon of profits will cease also.

At first glance this may seem unthinkable, so habituated are we to the concept of compound interest, of money making more money almost automatically. And our assumption is not unnatural. The compounding of interest or profits upon invested capital has been an outstanding feature of the capitalist system over virtually the whole period during which the laws (so-called) of economics were being formulated. It is not surprising therefore that the profit return from investment should have gained uncritical acceptance as a sort of eternal verity, rather than as a temporary accompaniment of a certain phase in capitalistic development, destined to disappear when that phase was past. Yet evidence that the latter is the case appears too strong to ignore. It is not sure, but it is highly probable. J. M. Keynes, arriving at the question from quite a different angle, has predicted zero interest within a generation.

If in fact profits do diminish as expansion ceases, it is clear why the rate at which this happens will dictate how fast we must accomplish our transition to a planned economy. For with profits will disappear the entire motivation of the existing system. Some substitute must be found and adopted at the same speed that the other disintegrates, unless we are to lapse into complete chaos. Planned economy is the only really promising substitute in sight.

It should be clearly understood that the foregoing refers purely to profits of the system *as a whole*. Conceivably even after these had ceased, profits would still be possible for an individual within the system. The point is that such a profit could then only be made at the expense of some other individual. For each gain there would be an offsetting loss, and consequently no net gain for the system as a whole. Under such circumstances profits cease to operate in any way for the general welfare. They would become simply an exercise of the predatory instinct with no socially valuable by-product as at present. Having no longer a social justification, their usefulness as a motivating force would disappear.

Preparation for Planned Economy

It remains then to be seen how fast we must learn to plan our economy, instead of guessing and trusting to expansion to cover up our mistakes. We can take some comfort in the philosophic reflection that changes of this magnitude seldom occur suddenly in nature. Her pace is evolutionary rather than revolutionary, and allows reasonable time to adjust to new conditions. International factors will unquestionably have the effect of slowing down the rate of the change. A large part of the world is still in the expansion stage of industrial development and will be for some time to come. Interaction between such areas and our own diminishing growth will tend to mitigate the effects of the latter.

But even with these reassuring considerations we will do well to waste no time in beginning to amass the tools and technique which a planned economy will demand. Engineers and functional economists alike, though they cannot in political probability convert us at once to adopt their proposals, can perform an invaluable service by determining precisely what statistical measures and data the planned economy will demand when its hour strikes, and then making every effort to ensure that the collecting of such data is begun at the earliest possible moment. There is at present no dearth of statistics. The difficulty is that they are largely fragmentary. We know in exhaustive detail what is going on in parts of the system, but over-all measures, and particularly physical measures, of the system as a whole are woefully inadequate. Yet it is these aggregate barometers that will be fundamental to planning on a national scale, or indeed even for gauging with any accuracy how fast the need for such planning is approaching.

The amassing of these aggregate data and measures will require the aid of the Federal Government. Fortunately this Administration is favorably disposed toward such activity. Many of the codes under the NRA provide already for the collection of physical statistics hitherto unavailable. The recent consolidation of fact-finding and interpreting operations in the Central Statistical Bureau is a step of the utmost importance, and one which should greatly facilitate cooperation between individual workers and the governmental agencies.

Within this area lies unquestionably the most useful work that planning advocates can perform in the immediate future. Such measures will be as enlightening during the transitional years immediately before us as in their ultimate use. They will serve to direct the moderate and experimental thrusts by which we are already beginning to explore our way forward into the planning zone. Without them we shall remain as blind as we have been in the past. We shall neither know where we are going, nor how far we have gone. Only on the basis of such knowledge can we intelligently proceed with the altering of our institutions to conform them with underlying changes. Those changes need not be feared unless we, by refusing to see or reckon with them, force them to pile up dangerously behind obsolete obstructions and thus breed disaster. Evolution at its own normal tempo harms no one unduly. Only when it is stupidly opposed does it at length begin to constitute a threat.

THE STOCK-TURN FETISH

By STANLEY J. GOODMAN

CERTAIN ideas concerning the significance of the rate of stock-turn have received wide acceptance among merchants and students of marketing. To the extent that this may arouse the interest of the store manager in matters above the daily routine of his business, it is of some value. The danger is, however, that generalizations may be accepted as a substitute for, rather than a stimulant of, clear thinking. There is a tendency in some quarters to make a fetish of the rapid stock-turn—to regard it as a direct means of reducing expenses and to set it up as an index of business efficiency.

It is felt, therefore, that there is some need for a reexamination of the question from a strictly practical point of view. Can any generalizations or principles be formulated which the merchant can safely apply in his business?

Some Typical Generalizations Regarding Stock-turn

It is not the purpose of this paper to present an exhaustive refutation of current theories of stock-turn. The aim is merely to show that no generalization can fit all the cases with only negligible exceptions. In considering some typical current beliefs on the subject of stock-turn, it will therefore suffice to point out for each one how situations might arise where the generalization would be false.

Faster Stock-turn Increases Profit on Investment.—The following is a typical statement of this frequently encountered generalization:

> If a retailer has $10,000 invested in merchandise and turns his stock once at a profit of $500, he has made 5% on his investment. If he turns his stock twice, he makes let us say $1,000 or 10% on his investment. Overhead expense will almost inevitably be increased with doubling of turnover, but will be far less than double.[1]

In a sense this proposition is a truism. It is arithmetically obvious that if gross margin and total expense remain unchanged, an increase in the rate of stock-turn will mean a higher return on inventory investment. But if a storekeeper should try to obtain this result, he would have to increase his sales volume. He would be likely to find, in practice, that he could not step up his volume very much without paying for it in added expense or sacrificing some gross margin. Thus, it is quite possible that he might end up with a faster stock-turn and a smaller profit.

Speeding up Stock-turn Makes for a Lower Ratio of Total Expense to Sales.—This proposition is usually supported by a statement to the effect that, since a portion of the expenses of most retail establishments is fixed, any increase in the rate of stock-turn will result in a lower expense per unit sold. Unquestionably this will often be the case. Yet it is easy to conceive of many cases where an increase in the rate of stock-turn would be accompanied by considerable additional expense.

For instance, expense for interest, insurance, and taxes is fixed by the

[1] Frey, A. W., and Nystrom, Paul H. *Merchandise Control.* New York: Alexander Hamilton Institute, 1927, p. 86.

size of the investment. It follows that this expense for the investment in merchandise will be less per unit sold, the higher the rate of stock-turn. The investment in buildings and equipment, however, might have to be increased in order to bring about the higher stock-turn. In order to achieve a larger volume of sales on the same stock, it would probably be necessary to attract more customers to the store. The best way to do this might conceivably be to acquire more expensive premises in a better location, to refinish the existing building or to add to its equipment. Such a procedure would increase the dollar amount of interest, insurance, and tax expense, and might raise this expense per unit. The same reasoning would apply to rent expense, where the premises were not owned by the business.

Nor is it always true that salesforce expense per unit sold will decrease with a rise in the rate of stock-turn. It is quite conceivable that the speeding up of stock-turn might be accomplished by reducing customer waiting at busy periods through augmenting the salesforce. Since, at other periods, this extra sales help might be idle, the increased rate of stock-turn might presumably be accompanied by a higher rather than a lower wage expense per unit.

Thus, without considering other items of expense in detail, it is clear that the retailer who is studying ways and means of increasing his business cannot be confident that if he speeds up his merchandise turnover he can expect lower expense ratios.

A Rapid Rate of Stock-turn Means Fewer Mark-downs.—It is argued that if merchandise is moving rapidly, less mark-downs for clearance purposes will be necessary, with the result that a higher effective gross margin will be attained. This statement conceals a confusion of stock-turn with good merchandising. If stocks move fast, it may be because they are particularly well selected to meet customer wants. It is true that a store which enjoys expert merchandising will not be forced into as many mark-downs as a similar store with a poorer selection of merchandise. This condition is the result of the better merchandising, however, and not of a higher stock-turn. If the factor of merchandising is eliminated, the generalization is open to question because one possible way of speeding up stock-turn is by taking more mark-downs. If two stores were to have identically the same stocks of merchandise, one might be getting a faster stock-turn than the other by the expedient of throwing out frequent mark-downs as a bait to its price-conscious customers. Thus, a rapid rate of stock-turn may accompany more rather than less mark-downs, with a lower gross margin as a result. Similar reasoning could be applied to the commonly-held view that a rapid rate of stock-turn results in fewer returns and allowances.

Other advantages often ascribed to a fast stock-turn are the fresher condition of stocks, the better styling of merchandise, and the development of greater selling enthusiasm on the part of the salesforce. All these things are not the results of high stock-turns. They are conditions, usually ascribable to good merchandising, which may produce a rapid rate of stock-turn, but which do not always accompany it.

Operating data for retail establishments in various fields are sometimes used as a basis for generalizations as to stock-turn. For instance, when reporting department stores were classi-

fied according to rate of stock-turn,[2] it appeared that the stores in the highest stock-turn group had the lowest total expense per dollar of sales. Readers of the Bureau's bulletins sometimes make the mistake of assuming a causal relationship between the rate of stock-turn and the lowness of the expense ratio. Coincidence is not sufficient proof, however. In the first place, these statistical summaries merely record an average relationship, the exceptions to which may be very important. Secondly, the stores in one stock-turn group might have some other common characteristics besides that of stock-turn, which might be the real causal factors. Finally, stores in different groups are probably not comparable, because of these other characteristics. If, for example, a store in the low stock-turn group, doing a volume of business of $50,000 a year, were to raise its stock-turn without much increasing its volume, it would not necessarily be comparable with stores with a similar stock-turn but with a $50,000,000 volume.

Thus, it appears that the generality of the commonly-held principles of stock-turn is open to challenge. In order to arrive at a fair appraisal of the place of stock-turn in retail store management, the problem should be attacked from its practical end. The chain of causation is, briefly, as follows. Changes in the rate of stock-turn are brought about by changes in certain elements either inside or outside the business. These elements are bound, to some extent at least, to affect the success of the business. The first step, therefore, should be to discover the most realistic measure or norm of business success, then to find the factors which directly affect this norm, and finally to trace the effect of changes in stock-turn upon these factors.

Measurement of Business Success

Profits are the goal of retail as of all other capitalist enterprise. The question now arises as to how to measure the achievement of this goal—how to find, in other words, the best index of business success. Three possible indices deserve consideration: dollar profits, net profit as a per cent of net worth, and net profit per dollar of sales. A possible fourth, net profit on inventory investment, can be eliminated—the investment in inventory, while it may be of prime importance in a retail business, does not include investment in other vital parts of the business, such as buildings and equipment. It cannot, therefore, reflect the efficiency of the business as a whole.

The ratio of net profit to net worth shows how much is being earned on the owners' investment, and is perhaps an indication of where further investment might be used best to bring the greatest return. But while this index is useful for the investor, it does not necessarily show the efficiency of the management as merchants. It would be possible, for instance, merely by revaluing assets, so to lower the net worth of the business that, although profits had fallen, the per cent earned on net worth would have risen.

The most popular index of business efficiency in the retail field is the net-profit-to-sales ratio. This shows how much net profit is derived from each dollar of sales. The weakness of this index lies in the fact that it leaves out entirely the concept of volume of business done. According to this index,

[2] Harvard University, Graduate School of Business Administration, Bureau of Business Research, Bulletin No. 83, "Operating Results of Department and Specialty Stores in 1929."

the little corner grocery store which does, say, a $5,000 business a year and clears $500 net is more efficient than the Atlantic & Pacific Tea Company with its $30,000,000 profit on a sales volume in the neighborhood of a billion dollars.

In a practical consideration of store management, volume cannot be omitted. In the final analysis, the business man wants the largest possible dollar profit. He cannot live on ratios. Any merchant would trade a store making $1,000 net for one making $10,000, no matter what the per cent earned on sales or net worth or inventory. If, in the course of his business, he can increase his dollar profits, he feels that he has attained a measure of success.

True, dollar profits are affected by changes in the price level. Even if the physical volume of business remains the same, a fall in prices might reduce the dollar sales more than it would expenses, and thus cause a poorer showing. If business success is defined, however, as an ability on the part of management to produce profits against a background of changing conditions, the fall in dollar profits might indicate that the management was lacking in foresight enough to adjust its policies to the decline in prices. Be that as it may, dollar profit is open to some objection as a measure of business efficiency as between different points of time, with different price conditions obtaining. This limitation made, however, there should be no objection to the use of dollar profits to show the relative success of one business as compared with another at the same time. Within the time span which concerns the retail executive in his usual decisions, therefore, it would seem that dollar profit is the most realistic and reliable test of the success of these decisions.

Immediate Determinants of Net Profit

The way to evaluate the place of stock-turn in store management is, clearly, to study the reaction of changes in stock-turn upon dollar profits. To do this, it is necessary to bring out another link in the chain of causation, namely, the factors which immediately determine the dollar amount of net profit in a retail business.

The amount of net profit in dollars which any business makes in a given period is determined by three factors—the gross margin per cent of sales, the total expense per cent of sales, and the sales volume. The first minus the second gives the rate of profit, and this rate, multiplied by the third, the dollar volume of profit. No other factor is needed to fix exactly the amount of dollar profit; this much is arithmetically obvious. Hence, if any other factor or combination of factors has an effect upon profits, it will manifest itself through one or more of these three factors—gross margin, operating ratio, and volume.

Thus, instead of trying to isolate the factor of stock-turn and argue *in vacuo*, it will facilitate a clear understanding if an attempt is made to determine the relationship between the rate of stock-turn and these three profit-determining factors.

Relation between Stock-turn and Profit-determining Factors

Every business decision which involves some change from the existing situation will, if put into action, have some effect upon one or more profit-determinants. For example, suppose a store decides to add to its stock a new line of merchandise. Since, if the old lines are not changed there is no reason to expect their sales to change, the

moment the first unit of the new line is sold, there will have been an increase in one profit-determining factor, volume. As will be pointed out below, this may be offset by an increase in expense ratios—in this case, the interest on inventory investment. But, regardless of what the net effect will be, there is bound to be a change in volume at least. Similarly, if a new building is leased, or a new installation of equipment is made in the present one, the expense factor is immediately affected; also, perhaps, the volume factor. Further examples could be mentioned; indeed, it is difficult to imagine a course of action in business representing some change which would not affect either volume, margin, or expense ratios.

It follows logically that those courses of action or changes which cause an alteration in the rate of stock-turn also affect one or more of the profit-determinants and, through them, net profit. Reserving for the moment the question of whether any generalizations can be made, it is apparent that, in any given case, the practical way of understanding the significance of stock-turn is, first, to see how the proposed change in the rate of stock-turn is to be brought about and, second, to trace through the effect of the required courses of action upon volume, margin, and expense.

A rise in the rate of stock-turn may involve either one or both of two things: (a) an increase in sales volume, (b) a decrease in inventory. Under the first heading, the rise may be brought about in four types of ways: through external factors, by better merchandising, by lowering gross margin, and by increasing expense ratios.

External Factors.—The rate of stock-turn may be accelerated by the impact of external factors beyond the control of the management. A sudden increase in the general demand for consumers' goods might cause a rise in a given store's sales volume, without any action on the part of the store's management. Thus gross margin need not change, and the added volume might even lower the total expense ratio. Similarly, a rise in the price level would swell the dollar volume of sales, would probably raise the effective gross margin, and might lower the expense ratio. In both these cases, the resultant rise in the rate of stock-turn would be attended by favorable changes in the profit-determining factors.

Better Merchandising.—If a store is able suddenly to improve the quality of its merchandising and offer the customers a better selection of goods, even if the investment in inventory remains the same, the sales volume will probably expand. If the improvement in merchandising is attained without any change in pricing or in expenses, the resultant increase in the rate of stock-turn will obviously have a favorable effect on profits.

Lowering Gross Margin.—By and large, more of a commodity can be sold in a given market at a low than at a high price. Thus, presumably, a store may step up its sales volume either by pricing its goods lower (*i.e.*, taking a smaller initial mark-up), or by taking more mark-downs. In this way, a larger volume can be attained on the same inventory, and hence the rate of stock-turn accelerated. It is impossible to say, however, whether the increased rate of stock-turn obtained in this way would be profitable or unprofitable. Both profit-making and loss-making changes have occurred in the profit-determining factors. Volume has increased and also, perhaps, expense ratios decreased—both profit-making changes. Gross margin has

decreased—a loss-making change. The ultimate effect, on profits, of this rise in the rate of stock-turn would vary from case to case, and would depend upon where the balance between these factors lay.

Increasing Expense Ratios.—It is possible to increase the volume of sales on the same inventory without any change in pricing, by means of various activities which involve expense. For instance, securing a better location would probably step up sales, but at the same time would increase rent expense. An advertising campaign, the installation of an air-conditioning plant in the summer, or the holding of special exhibitions would tend to swell the traffic in the store and thus increase sales, but this would also involve additional expense. The ratio of total expense to sales may or may not be raised as a result. If it is not, the maneuver is obviously profitable; if it is raised, it will depend upon the individual case as to whether the profit-making factor, increase in volume, is more powerful than the loss-making factor, increase in expense ratios.

A more rapid rate of stock-turn may also be obtained by reducing inventory. Since different items of merchandise sell at different rates, by purging a store's stock of the slower-moving items, the average rate of stock-turn could be raised. If the eliminated items had sold at all before, however, this speeding up of stock-turn would be attended by a decrease in sales volume. Expense ratios might be slightly improved. Where the policy of reduction in inventory is carried to the point of extreme hand-to-mouth buying, moreover, there would be an important effect upon gross margin. The manufacturer, faced with the additional costs of small-lot production, frequent deliveries, and extra handling, would probably shift at least a portion of these costs on to the purchasing retailer, who would then find his gross margin diminished. The ultimate effect upon net profit would again depend upon the relative efficacy of these three factors.

Although only increases in the rate of stock-turn have been here considered, it is possible, by reversing the reasoning, to understand the implications of a decrease in the rate of stock-turn.

One principle stands out clearly from the above treatment of the relationship between stock-turn and profits. The result achieved when either a rise or fall in the rate of stock-turn occurs is not the effect of stock-turn itself, but is caused by the changes which produce or accompany the altered stock-turn figure, in their reaction on the profit-determinants, sales volume, gross margin, and expense ratios.

Invalidity of Generalizations as to Effect of Stock-turn

That generalizations as to the effect of increasing or decreasing stock-turn are not possible will best be shown by considering a few imaginary, but possible cases. In the following examples, two stores of the same type, with the same type of inventory, are considered as operating at the same time.

TABLE I

	Store A		Store B	
Sales		$1,000,000		$1,000,000
Inventory		250,000		200,000
Stock-turn		4 times		5 times
Gross margin	(30%)	300,000	(29%)	290,000
Total expense	(28%)	280,000	(27%)	270,000
Net profit		20,000		20,000

Here is a case where a more rapid rate of stock-turn does not mean greater merchandising efficiency. The

two stores, one with a stock-turn of four times and the other of five times, earn the same net profit. Store A, with a larger inventory, can charge its customers more for the additional service of maintaining a wider assortment. It has thus been able to realize a margin enough higher to cover the additional expense of carrying the extra stock. In other words, the profit-making factor, higher margin, was exactly offset by the loss-making factor, higher expense; and, volume remaining the same, the net profit result was equally good in both cases.

TABLE II

	Store A		Store B	
Sales		$1,000,000		$1,250,000
Inventory		250,000		250,000
Stock-turn		4 times		5 times
Gross margin	(30%)	300,000	(30%)	375,000
Total expense	(28%)	280,000	(28.4%)	355,000
Net profit		20,000		20,000

Here both stores have identical stocks, priced the same, and purchased with equal skill. Store B, by an advertising campaign or by some promotional scheme, was able to achieve a larger sales volume on the same stock, and hence a higher rate of stock-turn than Store A. In doing so, however, the profit-making factor, added volume, was exactly offset by the loss-making factor, additional expense ratio. Thus, although Store B turned its stock five times a year to Store A's four times, its operations were no more successful than those of the latter.

Both stores had the same inventory, purchased with the same degree of merchandising ability. Store B priced its stock lower, causing sales volume to increase, and turnover to rise to five times. At the same time, although dollar expenses increased to take care of the additional volume of business, the total expense ratio declined somewhat; *i.e.*, expense per dollar of sales was less. The net result, however, in spite of the differences in stock-turn, was the same in each case, because the profit-making factors, more volume and lower expense ratio, were exactly offset by the loss-making factor, lower gross margin.

TABLE III

	Store A		Store B	
Sales		$1,000,000		$1,250,000
Inventory		250,000		250,000
Stock-turn		4 times		5 times
Gross margin	(30%)	300,000	(28%)	350,000
Total expense	(28%)	280,000	(26.4%)	330,000
Net profit		20,000		20,000

Although imaginary, the foregoing cases are by no means unreal. They are typical examples of how an increase in the rate of stock-turn might not increase the profitability of a retail business, and would not signify more efficient management. It would be just as plausible to have the B stores with the higher rate of stock-turn show smaller instead of equal net profits. The important thing is the fact that in each case the profitability or unprofitability of the step taken was decided, not by what happened to stock-turn, but what happened to the three profit-determinants, volume, margin, and expense ratio. Moreover, the conclusion which these cases bring out is the fact that, although changes in stock-turn are always accompanied by changes in volume, margin, and/or expense, the variety of combinations of different changes in these factors which may in fact obtain any given change in stock-turn is practically unlimited. This being the case, it is

patently impossible to make any valid generalization about the relationship of stock-turn to the profitability of a retail business.

Conclusion—The Place of Stock-turn in Store Management

In the final analysis, the rate of stock-turn is merely an accounting ratio. There are other turnover ratios: Sales to Total Assets, or the turnover of the total investment in a business; Sales to Net Worth, or the turnover of the owners' investment; Sales to Fixed Assets, or the turnover of the investment in plant. Sales to Inventory shows the turnover of that part of the investment which is tied up in merchandise stocks. In each case, these turnover ratios show the relationship between the volume of business done and the investment, either total or partial. To take any one of these ratios and set it up as an index of general business efficiency or as a profit-creating factor is neither logically nor practically justifiable. As between two cases, both with the same volume and the same rate of net profit before interest on that volume, obviously the one with the smaller investment is the better. It is better, however, only to the extent of the cost of the additional invested capital which the other business is forced to use. So long as there is no acute shortage of capital, the business with the larger investment has only to earn enough extra net profit before interest to make up for the cost of the additional capital, to put it on a par with the other business.

What has been said about investment-turnover ratios in general applies with equal force to inventory turnover or stock-turn in store management. A merchant is justified in adding to his inventory, so long as he can either increase his sales volume or raise his gross margin sufficiently to cover the cost of the additional investment, plus any other costs which may arise.

The foregoing analysis is intended to show that the rate of stock-turn has no direct causal relationship to profits. The direct factors are volume, margin, and expense, and, through them, a host of subsidiary factors which constitute the framework of retailing. The store manager, when considering a course of action, must use his judgment to foresee the effects of the step on these profit-determining factors. He should act only when he is convinced that the net result will be profitable. This sort of thinking transcends the sphere of stock-turn principles, and penetrates to the fundamental causal factors.

The successful store executive must show generalship in manipulating these three basic factors of his business profit. Broadly speaking, he can secure more volume by sacrificing either some gross margin or some expense or both. It is his job to decide when, where, and to what extent the sacrifice is to be made, on the basis of his estimate of the results. If he does this well, the rate of stock-turn will merely be an interesting statistical summary of part of the set-up—not a major instrument of control.

The rate of stock-turn which is ideal for any particular business should, therefore, be determined by the nature of the business. This is as true of different stores in the same line as it is of stores in different fields. Just as a jeweler with a low stock-turn rate is not necessarily a poorer merchant than the tobacconist with a high rate, so also the grocer doing a high-class charge business with a slow stock-turn is

no worse off, necessarily, than the grocery chain operator with a rapid stock-turn.

That good merchandising—*i.e.*, buying the best merchandise at the lowest price—is profitable for any business in any line is a foregone conclusion. This is the common factor which must be borne in mind as applying in any case which may arise. That good merchandising does result in a higher rate of stock-turn cannot be denied. But that the converse is true in enough cases to make stock-turn an index of merchandising efficiency has been demonstrated above to be false.

From the practical standpoint of store management, therefore, stock-turn must be discarded as a major instrument of control. The store manager should do his thinking in terms of the direct factors in profit, volume, margin, and expense. He must first define the nature of his business. This will guide him in discovering the ideal balance between these factors. If his merchandise sells primarily on a price basis—*i.e.*, if the elasticity of demand for his merchandise is high—then he must rely on price to build volume. He must combine good merchandising with as low a gross margin as he deems wise to give him the desired volume of business. Taking this volume, he must then carve out as large a dollar profit as possible by reducing expenses. One of the ways of reducing expenses is to keep the inventories down, since this reduces the interest expense per dollar of sales. Thus he should keep inventories down to the minimum consistent with an adequate assortment.

If, on the other hand, his business is of the type where volume is built, not on a price, but on a service basis, then his emphasis cannot be on cutting expenses. He will, in this case, find the ideal balance by creating volume through the right kind of expenses, and he can make the maximum dollar profit by good merchandising plus a higher gross margin. The higher gross margin is possible in this case, because of the lower elasticity of demand for his merchandise.

This, then, is as far as it is safe to generalize. Viewed thus, the rate of stock-turn cannot be accepted as a direct instrument of control in the mercantile business. The merchant must do his thinking in terms of the three basic profit-determining factors, sales volume, gross margin, and expense ratios. Any short-cut, whether or not it is in the guise of stock-turn principles, which tries to avoid this type of business thinking is dangerous and misleading.

THE CONSTRUCTION INDUSTRY AND ITS DIFFICULTIES—EFFECT OF THE PUBLIC WORKS BILL

By DEAN C. JENKINS

Construction and Unemployment

THE decline in the construction industry has now extended over five years.[1] An understanding of the depressed status of construction is afforded by the following figures for the value of contracts awarded, as reported by the F. W. Dodge Corporation, for the 37 eastern states:

TABLE I. CONSTRUCTION CONTRACTS AWARDED
(In millions of dollars)

	1927	1928	1929	1930	1931	1932	1933
Nonresidential..	2,366	2,502	2,590	1,974	1,119	481	404
Residential.....	2,573	2,794	1,916	1,101	811	280	249
Public Works & Utilities.....	1,264	1,338	1,248	1,448	1,163	590	603
Total.....	6,303	6,634	5,754	4,523	3,093	1,351	1,256
Per cent decline from previous year.....	.....	.....	13	21	32	56	7

The depression in the construction industry has been a direct and contributing cause of widespread unemployment in the many industries supplying building materials and in related lines. It has been generally estimated[2] that for each man employed in actual construction two or more men are engaged in the manufacture of materials and in necessary transportation services. In 1930 the unemployment census showed that 15.4% of the total number of workers in the construction industry were unemployed. At this time 395,000 construction workers were "out of a job, able, and looking for work." The census was taken in April when construction work is usually active. In addition, 1930 was a year when construction by public utilities was abnormally increased at the request of the President for the purpose of cushioning the depression. The record for the year 1930 shows a decline in the industry of only 21% from the previous year, and 32% from the high for all time in 1928; in contrast, the total value of construction work for 1933 shows a loss of 78% from the 1929 level, and 81% from the peak in 1928. With a construction industry operating at approximately 20% of 1928–29 capacity, the depressing effect on other industries is marked. Various estimates of unemployment due to loss in construction activity seem to center at about two million employees directly affected in the construction industry, and at least four or five million indirectly in factories and transportation services. It is apparent that the construction industry affects national business conditions to an important extent.

The virtual stagnation of this important industry has been indicated. Let us examine the sources of the difficulties. These may be found largely in maladjustments due to credit inflation and speculative building, to promotion of unwise, poor income-producing proj-

[1] The prostration of this industry together with some attempts at stabilization were discussed by Joseph B. Hubbard, "The Construction Industry in the Depression: Attempts at Stabilization," XI HARVARD BUSINESS REVIEW 2, January, 1933, p. 146.

[2] For one analysis, see Gill, C. Corrington, "Construction Statistics," 28 *Journal* of the American Statistical Association 181, March, 1933, p. 31.

ects, and to high costs of building construction.

Credit Financing

Difficulties due to poor credit risks could probably be minimized except for the interrelation of this phase with the high cost of many existing structures. Loans and mortgages were made in good faith in the vast majority of cases, but were based on a false prosperity and an insecure level of prices. When the depression brought lower incomes, leases were broken and losses in occupancy occurred. Lower rents became necessary. These factors combined to cause financial embarrassment even in projects which were not poorly planned or speculative in nature.

An excessive amount of building construction took place in our cities, mainly in the form of apartments, apartment hotels and office buildings. New York City is a leading example. Total real estate credit financing in metropolitan New York, as of December 31, 1932, has been estimated at $3 billion. The increases in guaranteed mortgages held by the four largest title and guarantee companies in New York are shown, as follows:

TABLE II. GUARANTEED MORTGAGES AND CERTIFICATES OUTSTANDING
(In millions of dollars)

	1913	1921	1929	1930	1931
Bond and Mortgage Guarantee Co.	.....	258	776	862	921
New York Title and Mortgage Co.	.....	60	639	703	729
Lawyers Title and Guarantee	0.3	38	200	219	224
Lawyers Mortgage Co.	138.0	134	395	420	435
Total	138.3	490	2,010	2,204	2,309

Source: Clark, Evans, *The Internal Debts of the United States*. New York: Macmillan Co., 1933, p. 75.

There has been a large increase in mortgage debt on urban property throughout the entire country. It is impossible to tell how much of this represents the financing of new construction. Loans for remodeling and improvements are included. A small proportion is undoubtedly for other purposes than construction, particularly the increases in loans by life insurance companies after 1929. The data given in Table III cover the three largest sources of real estate loans.

TABLE III. URBAN REAL ESTATE AND NONFARM MORTGAGES HELD BY
(In millions of dollars)

	Building and Loan Associations	Life Insurance Companies	Mutual Savings and Other Banks	Totals
1913	1,148	919	2,906	4,973
1921	2,659	1,326	4,383	8,368
1929	7,791	5,241	9,264	22,296
1930	7,760	5,564	9,236	22,560
1931	7,210	5,730	9,135	22,075

Source: Clark, *The Internal Debts of the United States*, p. 76.

Another important field in which construction has outrun our ability to pay is in the wide expansion of our road systems. Mechanical improvements and increased speed of motor cars have brought a need for more and better roads. States and counties have been compelled to finance new work with bonded indebtedness, in spite of large increases in tax rates. Some federal aid has been given to road construction but not at the expense of an increase in the national debt. Much larger proportions of state and local budgets are spent on highway construction. Although state and local government bond issues serve many purposes, the largest proportion is used to finance construction projects; these include roads,

schools, water supply and sewerage systems. The large increases in public debt, therefore, indicate to a fairly significant extent the amount of credit financing which has been required for public construction. The following tabulation shows both total net debt (deducting sinking funds) and per capita debt; the latter increased from

Table IV. Public Debt—(Excluding Federal Government)

	States		Counties		Incorporated Places and Other Civil Divisions	State and Local Total Net Debt	
	Total in Millions	Per Capita	Total in Millions	Per Capita	Total in Millions	Total in Millions	Per Capita
1890	$ 211	$ 3.37	$ 145	$ 2.51	$ 781	$1,137	$18.07
1902	239	3.03	197	2.80	1,434	1,869	23.77
1912	346	3.57	372	4.33	3,104	3,822	39.88
1922	935	8.64	1,273	13.18	6,481	8,689	79.09
1930	1,994	16.35					
1932	.....	.....	.....	.....	.....	16,570*	132.75*

* From Clark, *Internal Debts of the United States*, p. 258. The estimate for 1932 is based on reasonably accurate records of state debts; debts of local governmental agencies were computed from the 1922 census of public debt by adding new obligations issued and deducting for annual retirements.

Source: "Statistical Abstract of the United States," U. S. Dept. of Commerce, 1933.

$18.07 in 1890 to $132.75 in 1932. It is especially noteworthy that the trend of public debt turned upward about 1900, when the automobile was introduced. This may be a mere coincidence, but it is quite significant that the largest increments occur in the post-war period when the entire country embarked on a widespread program of better roads.

Building and construction contracts were let in the post-war period at inflated prices. This has had a marked effect on the total bonded debt listed above. "Computing all state and local borrowings for construction projects between 1914 and 1930, Dr. Clarence Heer in the Report of the President's Committee on Social Trends finds that $6,775 million out of $14,181 million of bond issues were a result of inflation in construction prices above the 1913 level."[3]

The annual service on this debt is now becoming a severe burden. Taxes are already high at a time when relief measures are necessary. In 1932 the Bureau of Agricultural Statistics "estimated that 1931 taxes were delinquent on nearly 40 million acres in 5 states. . . . More recent statistics indicate a more widespread delinquency and higher ratios of uncollected taxes."[4]

Labor Costs

Although there have unquestionably been maladjustments on the credit and financial side of the construction industry, in conjunction with the general economic disturbances of the post-war period, these difficulties have been aggravated by the high cost of building construction. Wages paid to construction labor and high material prices are the important factors in these high costs.

[3] Clark, Evans, *op. cit.*, p. 262.

[4] *Ibid.*, p. 267.

The following tabulation gives an index of wage scales paid since 1919 in twenty-two building-industry trades:

TABLE V*

Yaer	Index Number of Wage Rates	Year	Index Number of Wage Rates
1919	100.0	1926	153.9
1920	129.2	1927	156.9
1921	129.2	1928	156.9
1922	126.2	1929	161.5
1923	135.3	1930	166.2
1924	146.2	1931	158.4
1925	149.2	1932	144.8

* This information is based on reports in the *Architectural Record*, January, 1933, of data furnished by the National Association of Builders Exchanges and compiled by the Division of Statistics and Research of the F. W. Dodge Corporation.

As startling as these increases in wage scales are, it must be recalled that they were accompanied in the prosperous years by a general falling off in efficiency of labor. It has been stated, however, that despite a slightly smaller production per workman the actual output per man-hour was increased by better designs and materials, and improved mechanical equipment, tools and methods of work. It is also important to remember, in studying the above data, that a significant increase in construction wages had already occurred from 1914 to 1919, which was reflected in higher building costs. (See Chart I.) In fact, wages increased substantially after 1900. In a study of hours and wages in the building trades, Paul Douglas states:[5] "Up to 1914, the building trades had been able to secure an appreciably larger increase in real hourly wages than either the union or pay roll group in manufacturing. Thus, their real hourly index in that year was 17% above the average of the nineties (1890–1899) while that of the unionists in manufacturing was 4% below their corresponding base period."

Owing to lack of dependable data on actual earnings of construction workers, it is impossible to make accurate comparisons with wages paid in manufacturing industries. Mr. Douglas has used "*full-time* weekly earnings" in his studies of the building trades. Since there is so much drift from job to job among construction workers, there are no data available similar to the "annual money earnings" per workman given for various manufacturing industries.

TABLE VI. INDEX NUMBERS OF MONEY EARNINGS PER WORKMAN (1919 = 100)

	Foundry and Machine Shops	Iron and Steel Blast Furnaces	Iron and Steel Works and Rolling Mills	Auto Manufacture	All Factory Workers
1919	100.0	100.0	100.0	100.0	100.0
1921	76.2	65.2	59.5	76.8	85.6
1923	119.0	99.6	105.8	124.8	109.0
1925	124.2	96.5	100.8	131.2	
1927	.....	.....	100.3	125.3	

Source: *Earnings of Factory Workers, 1899–1927* (Census Monograph #10), U. S. Bureau of the Census, 1929.

While the increase in average wage rates in the building trades has been shown as 56.9% in the eight years from 1919 to 1927, this is not necessarily comparable with the changes in money earnings in the above table. The latter figures reflect the unemployment and reduced hours in 1921. Building and construction have been especially active from 1922 to 1929, so that the number of hours worked in this period have been high, and annual earnings, therefore, should have been correspondingly high.

There is some reason for greater *per diem* wages in the building industry due to irregularity of employment and the dependence of some trades on weather

[5] *Real Wages in the United States, 1890–1926.* Boston: Houghton Mifflin Co., 1930.

conditions. It would be interesting to know whether the total annual wages of construction workers is also greater than earnings of equally skilled mechanics in manufacturing industries. Strictly comparable data, however, do not exist. The 1930 Census (15th U. S.) of the Construction Industry made available for the first time an average annual wage, amounting in 1929 to $1,771 per workman in all classes of establishments. Compared with this we find from the Census of 1929 the following annual wages paid in several important manufacturing industries requiring approximately the same severity of manual labor:

TABLE VII. AVERAGE WAGE, MANUFACTURING INDUSTRIES, 1925

Foundries and Machine Shops...	$1,485
Iron and Steel Blast Furnaces...	1,552
Iron and Steel Works and Rolling Mills.....	1,659

There is a large variation in wages in different sections of the country. The 1930 Census of the Construction Industry shows that average annual wages per workman paid in the Middle Atlantic district were $2,270 on masonry subcontracts and $2,830 on plastering and lathing subcontracts. The actual wages paid to skilled mechanics would be still higher since the averages given include not only bricklayers, masons or plasterers but also their labor helpers.

Building Material Prices

There has been not only a large increase in wages paid in construction, but also a higher level of building material prices. These two factors have raised the total costs of building construction considerably, as shown in Chart I. Building material costs now remain considerably above the 1914 level. The decline in 1933 to 148% of the 1914 level has been small in proportion to the decline in rents and the average cost of living. The *Engineering News-Record* (ENR) index of building costs shows that in 1920 these were 283.7% of 1914 costs. (See Chart II.) Comparison with the cost of living indexes (National Industrial Conference Board) shows that there was a considerable lag in rents. The cost-of-living index for housing showed an increase of 84% by 1924, and a more or less steady decline since that time. An average of the first ten months' figures for 1933 shows that both rents and food have virtually returned to the 1914 level, while the cost of construction, as measured by the ENR Index, still remains 87.2% above 1914 building costs.

The ratio of building costs to general wholesale prices has been slowly increasing over a long period of time, due to more restricted opportunities for use of machine methods in construction work.[6] However, this gradual increase is insignificant compared to the large jumps in building material and labor costs during the World War and in subsequent years.

These high costs together with the concurrent effects of the depression have resulted in two forms of serious loss to property owners in the years from 1929 to 1933: first, lower incomes from rentals, which in many cases have in turn caused, second, losses from mortgage foreclosures. The general public has also suffered from a smaller proportionate decline in rents than in other costs, at least in the earlier years of the depression, due to attempts to maintain income from properties sufficient to meet carrying charges. A lack of incentive for new capital is caused

[6] McSweeney, Thomas F., "Consequences of Inflation on Construction," 110 *Engineering News-Record* 18, May 4, 1933, p. 564.

CHART I. INDEX NUMBERS OF BUILDING COSTS AND MATERIAL COSTS SHOWING VARIATION FROM 1914 TO 1933
1914 = 100

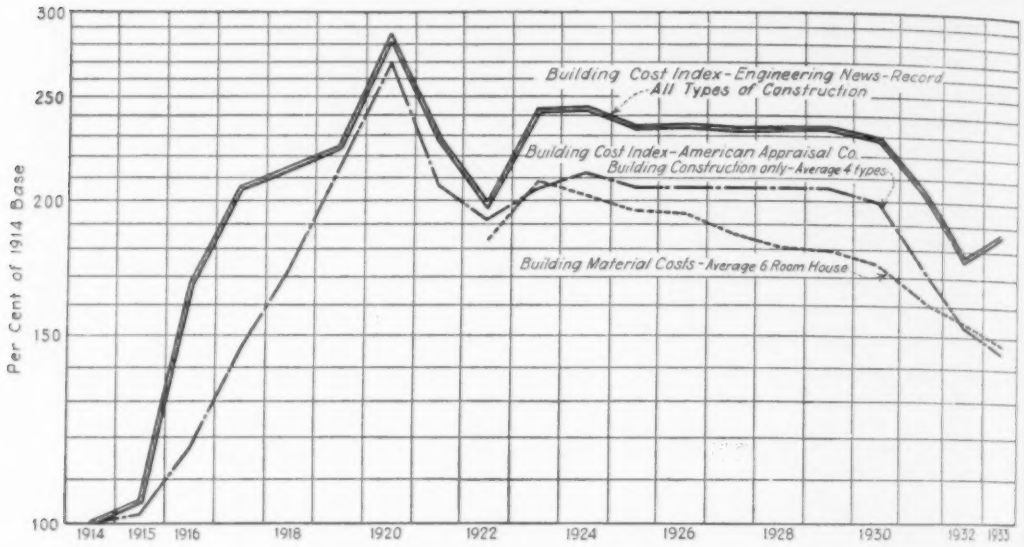
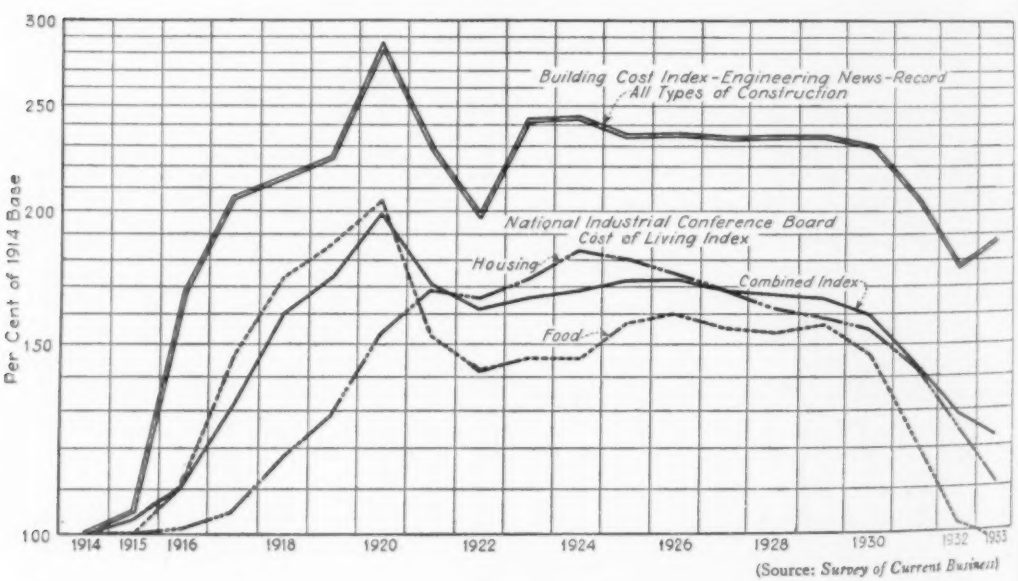


CHART II. COMPARISON OF BUILDING COST INDEX (ENGINEERING NEWS-RECORD) AND NATIONAL INDUSTRIAL CONFERENCE BOARD INDEXES OF COST OF LIVING
1914 = 100



(Source: *Survey of Current Business*)

by these conditions, by the overexpansion of construction projects in many localities, and by the fact that building costs are still disproportionately high. In addition, lower cost construction permitting lower rents would increase the financial difficulties of existing properties.

Effect of Public Works Program on Construction Industry

In the light of these conditions it is considered appropriate to discuss the effects of the Public Works Program. Attempts have been made to stabilize the industry through public construction and by extension of public credit through the Reconstruction Finance Corporation.[7] Hubbard has shown that, through 1932, private construction projects, both residential and commercial, shrank in volume faster than public works could be increased.

Since June, 1933, the Federal Government has been definitely committed to a $3,300,000,000 program[8] of public construction, including public buildings, highways, river and harbor improvements, development of water power and transmission of electric power, flood control, and low cost housing. This measure, an integral part of the National Recovery Act, also contemplates grants to states and municipalities for construction projects up to 30% of the cost of labor and materials. Loans are permitted under certain restrictions to both public and private corporations for bridges, tunnels, docks, waterworks, canals and markets, which are devoted to public use and self-liquidating in character. The program also includes extensive naval construction and appropriations for military posts throughout the nation.

The two chief reasons for expanding public works are, first, as a temporizing measure to provide for unemployment relief and, secondly, as a means of leveling the business cycle, thus acting (theoretically) as a stimulant for industry in general. As a relief measure, public works are admirable if projects of an income-producing character can be found. However, the fact that relief work is practically a "dole" is generally obvious, especially to the worker. The result often is that he loses initiative, particularly in seeking a position of economic self-sufficiency.

Whether the execution of a Public Works Program will achieve the second objective, namely, to revitalize private industry, remains to be seen. There are three major obstacles to be overcome: first, to maintain the confidence of the investing public so that privately initiated projects will be ready as the Government gradually withdraws from its program; second, to raise the general price level while holding building costs stationary, so that a normal relationship will result; and third, to find a sufficient volume of sound projects of self-liquidating character to prime the pump and put the unemployed back to work. Several factors seem to make the result doubtful.

As already stated, privately-initiated construction projects have tended, until the end of 1933, to shrink in volume faster than public works could be increased. Private investors are inclined to hold back due to the losses brought on by the depression and, in addition, because of uncertainty as to the effect of the Government's program. This tendency is aggravated by the inherent delay in executing a building program because of the time required

[7] See Hubbard, *op. cit.*

[8] $1,300,000,000 of the total has been allocated to crop loans and agricultural advances.

for completion of plans and necessary preliminary work.

With regard to correcting the disparity between construction and other costs, public-works projects may affect prices adversely. In anticipation of government purchases for public-works requirements, building-material prices tend to rise. The result is often a higher cost than originally estimated. Thus we have another cycle of relatively high-cost construction, which in all probability will be followed by a renewal of the difficulties and losses already discussed.

The situation is similar with regard to labor costs, as full union wages are paid on public-works projects. It is not surprising that labor unions attempt to maintain wage scales on government financed projects. From an economic viewpoint, however, the Public Works Administration should pay slightly less than the current wage scales in order to provide labor with an incentive to look for employment on private projects. If this were done, there would be less tendency for the sources of private capital to dry up, and for losses in private construction to offset the expansion of public works.

The chief difficulty of such a program is to find self-liquidating projects where private initiative has not been able to operate. Such projects are few in number for two reasons: first, in the prosperous years financially sound promotions, based on real need, were built, and it was not until much later when speculative ventures were brought forward that the depression arrived; and secondly, with smaller incomes at the present time we are less able to pay for even desirable projects. When new dams and water power projects are proposed, it is necessary to find markets for electricity; and current power production is still below the 1929 peak in every section of the country! At the end of 1933 electric power production on the average was about equal to that for the year 1931. The construction of new irrigation projects, bringing additional acreages of fertile land under cultivation, forces the abandonment of "marginal" lands with higher production costs, at the same time that farmers must face the competition of the "back-to-the-farm" movement. Even the benefit of improved means of transportation, roads and waterways, must be questioned on the basis of the relative cost in taxes, and the possible losses inflicted thereby on already hard-pressed railroads.

Conclusion—Costs and Effects

While it is true that public works provide needed employment, the cost of this program is a serious matter. Financing the bond issue required for the $3,300,000,000 expenditure[9] will cost $220,000,000 annually. Congress has provided new taxes, and also a direct levy on the capital of American business corporations amounting to one-tenth of one per cent of their net worth. The imposts laid originally on gasoline and corporation dividends have recently been replaced by liquor taxes. In addition to the interest and amortization costs, an important consideration is the effect of the necessary federal financing. Increased Treasury financing and long-term bond issues will raise the costs of future financing and may even affect the value of existing investments in government bonds.

The net result of the Public Works Program is to build a larger national debt with higher interest and amorti-

[9] As this goes to press it is currently reported that an additional $2,000,000,000 will be requested for public-works construction.

zation charges. Unless the projects constructed are self-liquidating, higher taxes must be levied. The increase in tax deliquency has been indicated. The issue of more and more government securities for conversion into fixed assets unquestionably is bringing us nearer the point where uncontrolled inflation and debt repudiation will be the easiest escape from the dilemma.

Finally, we must inquire as to the effect this program will have on the long-term welfare of the construction industry. If business does start forward again due to the expansion of public works, it will nevertheless be true that public construction will be built up to the full needs of the country for some time to come. A policy of retrenchment must be adopted by the Government in due time. It will then be many years before new public construction will again be required. Many industries of the country are now built up to overcapacity. It is exceedingly probable, therefore, that the impetus given by public works built on government credit may subject the construction industry to additional years of depression.

The Government's policy has been explained as twofold in purpose. If unemployment relief is contemplated, it is much better to pay wages for value received in work, and avoid the undesirable psychological effects of an outright "dole." Thus we shall meet the requirements of social justice.

The policy of borrowing on our future to finance the unemployed is one which cannot long be continued. The chief problem of the Government, no less than of individuals, is the balancing of the budget. Finding work for our unemployed is also an imperative question, but industry cannot be expected in the near future to take back all who were employed in our years of prosperity and inflation. As soon as those who cannot be reabsorbed return to the soil and find their own means of livelihood, the Government will be able to withdraw from the subsidizing of public works with greater benefit to the country as a whole, and ultimately to the construction industry as well.

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